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§3.9. Disposal Wells.

**(a) Intent; definitions.**

**(1) Intent.**

**(A)** Any person who disposes of saltwater or other oil and gas waste by injection into a porous formation not productive of oil, gas, or geothermal resources shall be responsible for complying with this section, Texas Water Code, Chapter 27, and Title 3 of the Natural Resources Code.

**(B) It is the intent of this section that the applicant demonstrates, and the director finds, that:**

**(i) the injected fluids will be confined to the permitted injection interval;**

**(ii) all usable-quality water and underground sources of drinking water as defined by the Commission's Groundwater Advisory Unit and §3.30(e)(7)(B) of this title (relating to Memorandum of Understanding between the Railroad Commission of Texas (RRC) and the Texas Commission on Environmental Quality (TCEQ)) will be isolated and sealed off to effectively prevent contamination and harm from migration of injected fluids or displaced formation fluids;**

**(iii) all potentially productive zones and overpressured zones will be isolated and sealed off to prevent vertical migration of fluids or gases behind the casing; and**

**(iv) the injection of fluids will not endanger or injure human health and safety.**

**(2) Definitions.**

**(A) Affected person--A person who has suffered or will suffer actual injury or economic damage other than as a member of the general public or as a competitor. The term includes surface owners of property on which a well is located and Commission-designated operators of wells located within one-half mile of a proposed disposal well.**

**(B) Commercial disposal well--A well whose owner or operator receives compensation from others for the hauling and/or disposal of oil field fluids or oil and gas wastes**

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**that are wholly or partially hauled to the well.**


**(C) Director--The director of the Oil and Gas Division of the Railroad Commission of Texas or the director's delegate.**

**(D) Hauling of oil field fluids or oil and gas wastes--Transportation of oil field fluids or oil and gas wastes by truck or other vehicle other than a pipeline or a flowline.**

**(E) Orphaned well--A well issued a permit by Commission with no reported production or activity for the preceding 12 months and whose designated operator's organization report has become delinquent or inactive.**

**(F) Owner of record--Person or persons shown as an owner of a tract by public records including but not limited to deed records, tax records, appraisal district records, and probate records.**

**(b) Permit required** ~~[(+)-General]~~.

**(1) Before any person engages in the disposal of saltwater** [Saltwater] or other oil and gas waste, as that term is defined in the Texas Water Code, Chapter 27, ~~[may be disposed of, upon application to and approval by the commission,]~~ by injection into **a porous formation that is not productive** ~~[nonproducing zones]~~ of oil, gas, or geothermal resources ~~[bearing formations]~~ **and that**   
**contains** ~~[that contain]~~ water mineralized by processes of nature to such a degree that the water is unfit for domestic, stock, irrigation, or other general uses, **the person shall apply for, and obtain, a permit from the Commission** ~~[. Every applicant who proposes to dispose of saltwater or other oil and gas waste into a formation not productive of oil, gas, or geothermal resources must obtain a permit from the commission] authorizing the disposal in accordance with Texas Water Code, Chapter 27, Texas Natural Resources Code, Title 3, and this section. [Permits from the commission issued before the effective date of this section shall continue in effect until revoked, modified, or suspended by the commission.]~~

**(2) Permit expiration.**

**(A) A disposal well permit with a stated term expires on the last day of that term if, in the case of a new well, the operator has not spudded the well, or, in the case of the**

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conversion of an existing well, the operator has not commenced operations on the well specific to the conversion of the well to injection.

(B) A disposal well permit that does not contain a stated term or expiration date and that was issued prior to June 1, 2013, will expire on June 1, 2015, if the well has not been spudded or conversion operations commenced prior to that date.

(C) A disposal well permit issued on or after June 1, 2013, that does not contain a stated term or expiration date will expire three years after the date the permit is issued if the well has not been spudded or conversion operations commenced prior to that date.

(3) The Commission shall not issue a permit for injection of fluids containing hydrogen sulfide unless the applicant also complies with the requirements of §3.36 of this title (relating to Oil, Gas, or Geothermal Resource Operation in Hydrogen Sulfide Areas).

(c) [(2)] Geological requirements.

(1) Before ~~any~~ [such] formations are approved for disposal use, the applicant shall show that the formations are separated from underground sources of drinking water [freshwater formations] by impervious beds which will give adequate protection to such underground sources of drinking water [freshwater formations]. The applicant shall show that such geologic separation consists of a minimum of 250 feet of impermeable strata between the base of usable-quality water and the top of the injection interval and that the 250 feet of impermeable strata includes at least one zone with a continuous thickness of at least 100 feet. In addition, the applicant shall show that there is a minimum of 100 feet of continuous impermeable strata between the base of the deepest underground source of drinking water and the top of the injection interval.

(2) The applicant must submit a letter from the Groundwater Advisory Unit of the Oil and Gas Division stating that the use of such formation will not endanger the usable-quality water [freshwater strata] in that area and that the formations to be used for disposal are not underground sources of drinking water [freshwater-bearing]. To obtain the Groundwater Advisory Letter, the applicant shall submit to the Groundwater Advisory Unit one copy of the completed Form W-14 (Application to Dispose of Oil & Gas Waste by Injection into a Porous Formation Not Productive of



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**Oil or Gas), a plat with each survey identified, and a representative electrical log.**

**(d) Filing of application.**

**(1) [(3)] Application. An [The] application to dispose of saltwater or other oil and gas waste by injection into a porous formation not productive of oil, gas, or geothermal resources shall be filed with the commission in Austin [accompanied by the prescribed fee]. On the same date, one copy of the application shall be filed with the appropriate district office. The application form shall be executed by a person having knowledge of the facts entered in the form.**

**(2) Fees. The applicant shall pay the fees prescribed in §3.78 of this title (relating to Fees and Financial Security Requirements).**

**(3) Required information and attachments for a new disposal well permit. An application for a new disposal well permit under this section shall contain the following information and attachments:**

**(A) a completed Form W-14 (Application to Dispose of Oil & Gas Waste by Injection into a Porous Formation Not Productive of Oil or Gas);**

**(B) all required logs:**

**(i) if the application is for a new permit for an existing well, a complete electrical log of the proposed disposal well or a complete log of a nearby well;**

**(ii) if the application is for a new permit for a well to be drilled, a complete electric log of a nearby well. Once the well has been drilled, the permittee shall submit to the Commission a complete log of the well from surface to total depth. The formations behind the surface casing and any intermediate casing shall be open hole logged prior to setting the surface casing and intermediate casing;**

**(iii) at a minimum, such logging shall consist of a spontaneous potential log, resistivity log, a natural gamma ray log, and a porosity log;**

**(iv) an operator may request approval of an exception to this requirement by filing with the Commission a written request. In determining whether to grant an exception, the Commission may consider the availability and quality of existing logs for wells in**

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1 close proximity to the well that is the subject of the exception request;

2 (C) a letter from the Groundwater Advisory Unit stating the protection  
3 depth as defined by §3.13(a)(2)(C) of this title (relating to Casing, Cementing, Drilling, and  
4 Completion Requirements) to which usable-quality water must be protected, as determined by the  
5 Groundwater Advisory Unit to demonstrate that the well will not endanger usable-quality water, or  
6 that the formations or strata to be used for disposal are not an underground source of drinking  
7 water. The date of issuance of the letter from the Groundwater Advisory Unit shall be within five  
8 years of the date the disposal well permit application is filed with the Commission;

9 (D) a map showing the location of all wells of public record within one-half  
10 mile radius of the proposed disposal well. The map shall indicate the Commission-designated  
11 operator of each well within one-half mile of the proposed disposal well location. For a commercial  
12 disposal well permit application, the map also shall show the owner of record of the proposed  
13 disposal well tract and the owner of record of the real property for surface tracts that adjoin the  
14 proposed commercial disposal well tract;

15 (E) a table of all wells of public record that penetrate the proposed disposal  
16 interval and that are within a one-quarter mile radius of the proposed disposal well. The table shall  
17 include the well identification, date drilled, total depth, current status, and the plugging dates of  
18 those wells that are plugged. The table shall identify any wells that are unplugged, improperly  
19 plugged, or orphaned, and that penetrate the proposed injection interval. In addition, the table  
20 shall identify any wells within the one-quarter mile radius that lack cement behind the casing  
21 through the proposed disposal interval. Alternatively, an applicant may request a variance under  
22 subsection (g)(2) of this section;

23 (F) a list of the names and mailing addresses of all persons and local  
24 governments who were notified of the application as required by subsection (e)(2) of this section  
25 and when the notification was mailed, and a signed statement attesting to notification of the listed  
26 persons and local governments;

27 (G) an affidavit of publication signed by the publisher that the notice

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**required by subsection (e)(3) of this section has been published in a newspaper of general circulation in the county where the disposal well will be located, including a newspaper clipping of the published notice. If the application is for a commercial disposal well, that fact must be stated in the published notice; and**

**(H) any other technical information that the director may require as necessary to facilitate the review of the application. Such information may include a cement bond log, a cementing record, or a well bore sketch.**

**(4) Required information and attachments for amendment of an existing permit.**

**Figure: 16 TAC §3.9(d)(4)**

Required Information and Attachments for Amendment of an Existing Permit				
Filing requirements	Amend injection interval	Amend injection pressure	Amend injection volume	Amend to commercial
Filing fees	Yes	Yes	Yes	Yes
Application form	Yes	Yes	Yes	Yes
Electric log	Yes, unless previously filed	No	No	No
Groundwater Advisory Unit letter	Yes, unless previously filed	No	No	No
Area of review; map of wells and table of wells	Yes, if current permit issued before 4/1/82, or change is uphole	No	No	No
Step-rate test	No	Yes, if pressure is greater than 0.5 psi/foot of depth	No	No
Ownership survey map to show wells and operators within 1/2 mile radius	Yes	Yes	Yes	Yes

**(5) [(4)] Commercial disposal well. An applicant for a permit to dispose of oil and gas waste in a commercial disposal well shall clearly indicate on the application and in the published notice of application that the application is for a commercial disposal well permit. [For the purposes of this rule,**

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1 ~~"commercial disposal well" means a well whose owner or operator receives compensation from others for~~  
2 ~~the disposal of oil field fluids or oil and gas wastes that are wholly or partially trucked or hauled to the~~  
3 ~~well, and the primary business purpose for the well is to provide these services for compensation].~~

4 (e) [(5)] Notice and opportunity for hearing.

5 (1) [(A)] **Notice of new application.** The applicant shall give notice **as required by**  
6 **paragraph (2) of this subsection** by mailing **by regular mail and certified mail, return receipt**  
7 **requested, on the date the application is submitted to the Commission, the following:** [or delivering]

8 (A) a copy of the **front and back of the** application;

9 (B) a map identifying the location of the proposed well, showing a north  
10 **arrow; scale; geographic subdivisions appropriate for the scale; and by inset or otherwise,**  
11 **landmarks or other features such as roads and highways in relation to the proposed well in**  
12 **sufficient detail to allow a person to reasonably ascertain where an owned or occupied property is**  
13 **with respect to the proposed disposal well location; and**

14 (C) the following notice, with the information relating to the specific  
15 **application completed:**

16 **Figure: 16 TAC §3.9(e)(1)(C)**

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**NOTICE OF APPLICATION FOR A DISPOSAL WELL PERMIT**

Attached is a copy of an application for a disposal well permit under the Railroad Commission's Statewide Rule 9 (16 Texas Administrative Code §3.9), relating to Disposal Wells. [Company name and address] is applying to the Railroad Commission of Texas for a permit to dispose of produced saltwater or other oil and gas waste by well injection into a porous formation not productive of oil or gas. The applicant proposes to dispose of oil and gas waste into the [formation name]; [lease name]; [well number(s)]. The proposed disposal well is located at [address]; approximately [direction and number of miles from nearest town] in the [field name] in [County or Counties]. The water will be injected into strata in the subsurface depth interval from \_\_\_\_\_ to \_\_\_\_\_ feet. Attached is a copy of the application form and a map identifying the location of the proposed well.

You are receiving this notice because you have been identified as a potentially affected person or local government to which 16 TAC §3.9(e) requires that the applicant for a disposal well permit provide notice.

If you have objections to the issuance of a disposal well permit for this well, you may submit a letter of protest. Protests to the application from local government or persons who object and can show that they may be adversely affected, or requests for further information concerning any aspect of the application, should be submitted in writing to the Director, Oil and Gas Division, Railroad Commission of Texas, 1701 North Congress Avenue, Austin, Texas 78711. Unless the Commission receives a protest to the application, the director may take final administrative action on the application (e.g., approve, deny, return, or refer to hearing) no fewer than 15 days after the date the application is filed with the Commission.

Please be advised that the Railroad Commission of Texas does not have jurisdiction over roads, traffic, property values, zoning, noise, odors, esthetics, leasing, pipeline easements, or royalty payments.

**(2) Notice to individuals and local governments. On or not more than 30 days before the applicant mails or files the application with the Commission, the applicant shall give notice of the application to the following affected persons and local governments: [who include]**

**(A) each [the] owner of record of the surface tract on which the well is located;**

**(B) each commission-designated operator of any well or any well for which an unexpired drilling permit has been issued located within one-half mile of the proposed disposal well;**

**(C) the county clerk of the county in which the well is located;**

**(D) the city clerk or other appropriate city official of any city where the well is located within the municipal boundaries of the city[~~, on or before the date the application is mailed to or~~**

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1 filed with the commission. For the purposes of this section, the term "of record" means recorded in the  
2 real property or probate records of the county in which the property is located].

3 **(E) the groundwater conservation district, if the well is to be located in an**  
4 **area covered by a groundwater conservation district that has an established mailing address;**

5 **(F) [(B)] if the application is for** [In addition to the requirements of subsection  
6 (a)(5)(A) of this section,] a commercial disposal well permit, [applicant shall give notice to] owners of  
7 record of each surface tract that adjoins the proposed disposal tract [by mailing or delivering a copy of the  
8 application to each such surface owner.]; **and**

9 **(G) [(C)] members of any other** [If, in connection with a particular application,  
10 the commission or its delegate determines that another] class of persons **the director determines, after**  
11 **review of the application, should receive notice of that application** [should receive notice of the  
12 application, the commission or its delegate may require the applicant to mail or deliver a copy of the  
13 application to members of that class. Such classes of persons could include adjacent surface owners or  
14 underground water districts].

15 **(3) Notice by publication.**

16 **(A) [(D)]** In order to give notice to other local governments, interested, or  
17 affected persons, notice of the application shall be published once by the applicant in a newspaper of  
18 general circulation for the county where the well will be located [in a form approved by the commission  
19 or its delegate]. **If the application is for a commercial disposal well, that fact shall be stated in the**  
20 **published notice. Such notice shall be published no more than 30 days before the applicant submits**  
21 **the application to the Commission.**

22 **(B) The following notice, with the information relating to the specific**  
23 **application completed, shall be used:**

24 **Figure: 16 TAC §3.9(e)(3)(B)**

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**NOTICE OF APPLICATION FOR COMMERCIAL OIL & GAS WASTE  
DISPOSAL WELL PERMIT**

[Company name and address] is applying to the Railroad Commission of Texas for a permit to dispose of produced saltwater or other oil and gas waste by well injection into a porous formation not productive of oil or gas. The applicant proposes to dispose of oil and gas waste into the [formation name]; [lease name]; [well number(s)]. The proposed disposal well is located at [address]; approximately [direction and number of miles from nearest town] in the [field name] in [County or Counties]. The water will be injected into strata in the subsurface depth interval from \_\_\_\_\_ to \_\_\_\_\_ feet.

**LEGAL AUTHORITY:** Texas Water Code, Chapter 27, as amended; Texas Natural Resources Code, Title 3, as amended; and the Railroad Commission's Oil and Gas Division Rules (Statewide Rules) at 16 Tex. Admin. Code, Chapter 3.

If you have objections to the issuance of a permit for this well, you may submit a letter of protest. Protests to the application from local government or persons who object and can show that they may be adversely affected, or requests for further information concerning any aspect of the application, should be submitted in writing to the Director, Oil and Gas Division, Railroad Commission of Texas, 1701 North Congress Avenue, Austin, Texas 78711. Unless the Commission receives a protest to the application, the director may take final administrative action on the application (e.g., approve, deny, return, or refer to hearing) no fewer than 15 days after the date the application is filed with the Commission.

Please be advised that the Railroad Commission of Texas does not have jurisdiction over roads, traffic, property values, zoning, noise, odors, esthetics, leasing, pipeline easements, or royalty payments.

- 1                    **(C)** The applicant shall file with the commission in Austin proof of publication prior to
- 2 the hearing or administrative approval. **The following affidavit of publication format may be used:**  
**Figure: 16 TAC §3.9(e)(3)(C)**

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Affidavit of Publication  
STATE OF TEXAS  
COUNTY OF \_\_\_\_\_

Before me, the undersigned authority, on this day personally appeared [name of person], the [title of person] of the [name of newspaper], a newspaper having general circulation in [name(s) of county(ies)] County(ies), Texas, who being by me duly sworn, deposes and says that the foregoing attached notice was published in said newspaper on the following date(s), to wit: [list all dates of publication].

[signature of person]  
[typed or printed name of person]

Subscribed and sworn to before me this the [day] of [month], [year], to certify which witness my hand and seal of office.

[signature of notary]  
[typed or printed name of notary]

Notary Public in and for  
[name of county] County, Texas

**(4) The Commission shall not issue a permit for injection of fluids containing hydrogen sulfide unless the applicant also complies with the requirements of §3.36 of this title (relating to Oil, Gas, or Geothermal Resource Operation in Hydrogen Sulfide Areas).**

**(5) Notice requirements for amended permit applications. If the applicant seeks to amend an existing permit issued under this section, the applicant shall provide notice as follows:**

**Figure: 16 TAC §3.9(e)(5)**

Notice Requirements for Amended Permit Applications				
Notify	Amend injection interval	Amend injection pressure	Amend injection volume	Amend to commercial
Operators of wells within 1/2 mile radius	Yes	Yes	Yes	Yes
Surface owner	Yes	Yes	Yes	Yes
Adjacent surface owners	No	No	No	Yes

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County clerk	Yes	No	No	Yes
City clerk	Yes, if within city limits	No	No	Yes, if within city limits
Groundwater conservation district	Yes	Yes	Yes	Yes
Publication	Yes	No	No	Yes, specify "commercial wells"

1                   (6) ~~(E)~~ Protested applications. **The Commission shall not approve any application**  
2 **fewer than 15 days after notice has been given to all affected persons as required by this section. If**  
3 **the Commission receives a protest from an affected person or local government before the**  
4 **Commission staff takes final administrative action on an application or if the director determines**  
5 **that a hearing is in the public interest, then the Commission will hold a hearing on the application**  
6 **after giving notice of the hearing to the persons and entities specified in subsection (e)(2) of this**  
7 **section and any other person or entity that has expressed, in writing, an interest in the application.**

8                   [~~7~~]

9                   ~~[(i) If a protest from an affected person or local government is made to the~~  
10 ~~commission within 15 days after the application is filed with the Commission or of publication,~~  
11 ~~whichever is later, or if the commission or its delegate determines that a hearing is in the public interest,~~  
12 ~~then a hearing will be held on the application after the commission provides notice of hearing to all~~  
13 ~~affected persons, local governments, or other persons, who express an interest, in writing, in the~~  
14 ~~application.]~~

15                   ~~[(ii) For purposes of this section, "affected person" means a person who has~~  
16 ~~suffered or will suffer actual injury or economic damage other than as a member of the general public or~~  
17 ~~as a competitor, and includes surface owners of property on which the well is located and commission-~~  
18 ~~designated operators of wells located within one-half mile of the proposed disposal well.]~~

19                   (7) ~~(F)~~ **Unprotested applications.** If no protest from an affected person **or local**  
20 **government has been** ~~[is]~~ received by the commission, the **director** ~~[commission's delegate]~~ may  
21 administratively approve the application **no fewer than 15 days from the date the Commission receives**

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1 **the application, the date of the required individual notice, or the date of publication, whichever is**  
2 **later.** If the **director** [~~commission's delegate~~] denies administrative approval, the applicant shall have a  
3 right to a hearing upon request. [~~After hearing, the examiner shall recommend a final action by the~~  
4 ~~commission.~~]

5 **(f) [(6)]** Subsequent commission action.

6 **(1) [(A)]** A permit for saltwater or other oil and gas waste disposal may be modified,  
7 suspended, or terminated by the commission for just cause after notice and opportunity for hearing, if:

8 **(A) [(i)]** a material change of conditions occurs in the operation or completion of  
9 the disposal well, or there are material changes in the information originally furnished;

10 **(B) [(ii)]** [~~freshwater is likely to be polluted as a result of~~] continued operation of  
11 the well **is likely to endanger underground sources of drinking water or human health or safety;**

12 **(C) [(iii)]** there are substantial violations of the terms and provisions of the  
13 permit or of commission rules;

14 **(D) [(iv)]** the applicant has **provided incorrect information, has failed to**  
15 **provide the required notice, or has** misrepresented any material facts during the permit issuance  
16 process;



17 **(E) [(v)]** injected fluids **are** escaping from the permitted disposal **interval** [~~zone~~];  
18 or

19 **(F) [(vi)]** waste of oil, gas, or geothermal resources is occurring or is likely to  
20 occur as a result of the permitted operations.

21 **(2) [(B)]** **Except for commercial disposal well permits, a** [~~A~~] disposal well permit may  
22 be transferred from one operator to another operator **by filing Form P-4 (Producer's Certificate of**  
23 **Compliance and Transportation Authority), unless** [~~provided that~~] the **director notifies** [~~commission's~~  
24 ~~delegate does not notify~~] the present permit holder of an objection to the transfer prior to the date the  
25 lease is transferred on Commission records. **Transfer of a commercial disposal well permit requires**  
26 **written approval by the director after an inspection and a review that confirms compliance with a**  
27 **permit issued under this section and applicable Commission rules.**

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1                   ~~[(C) Voluntary permit suspension.]~~

2                   ~~[(i) An operator may apply to temporarily suspend its injection authority~~  
3 ~~by filing a written request for permit suspension with the commission in Austin, and attaching to the~~  
4 ~~written request the results of an MIT test performed during the previous three-month period in accordance~~  
5 ~~with the provisions of paragraph (12)(D) of this section. The provisions of this subparagraph shall not~~  
6 ~~apply to any well that is permitted as a commercial disposal well.]~~

7                   ~~[(ii) The commission or its delegate may grant the permit suspension~~  
8 ~~upon determining that the results of the MIT test submitted under clause (i) of this subparagraph indicate~~  
9 ~~that the well meets the performance standards of paragraph (12)(D) of this section.]~~

10                  ~~[(iii) During the period of permit suspension, the operator shall not use~~  
11 ~~the well for injection or disposal purposes.]~~

12                  ~~[(iv) During the period of permit suspension, the operator shall comply~~  
13 ~~with all applicable well testing requirements of §3.14 of this title (relating to plugging, and commonly~~  
14 ~~referred to as Statewide Rule 14) but need not perform the MIT test that would otherwise be required~~  
15 ~~under the provisions of paragraph (12)(D) of this section or the permit. Further, during the period of~~  
16 ~~permit suspension, the provisions of paragraph (11)(A) - (C) of this section shall not apply.]~~

17                  ~~[(v) The operator may reinstate injection authority under a suspended~~  
18 ~~permit by filing a written notification with the commission in Austin. The written notification shall be~~  
19 ~~accompanied by an MIT test performed during the three-month period prior to the date notice of~~  
20 ~~reinstatement is filed. The MIT test shall have been performed in accordance with the provisions and~~  
21 ~~standards of paragraph (12)(D) of this section.]~~

22           (g) ~~[(7)]~~ Area of Review.

23                   (1) ~~[(A)]~~ Except as otherwise provided in this paragraph, the applicant shall review the  
24 ~~[date of]~~ public record for wells that penetrate the proposed disposal **interval** ~~[zone]~~ within a 1/4 mile  
25 radius of the proposed disposal well to determine if all **abandoned** wells have been plugged in a manner  
26 that will prevent the movement of fluids from the disposal **interval** ~~[zone]~~ into **underground sources of**  
27 **drinking water** ~~[freshwater strata]~~. The applicant shall identify in the application any wells which appear

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from such review of public records to be unplugged or improperly plugged and any other unplugged or improperly plugged wells of which the applicant has actual knowledge. **The Commission shall not approve a permit application under this section for a disposal well for which the area of review includes any orphaned wells. The applicant shall review the public record for wells that penetrate the proposed disposal interval within a 1/4 mile radius of the proposed disposal well to determine if all wells are cemented across the injection interval in such a manner as to prevent the movement of fluids from the disposal interval into underground sources of drinking water.**

(2) [(B)] The **director** [commission or its delegate] may grant a variance from the area-of-review requirements of **paragraph (1) of this subsection** [subparagraph (A) of this paragraph] upon proof that the variance will not result in a material increase in the risk of fluid movement into **underground sources of drinking water** [freshwater strata] or to the surface. Such a variance may be granted for an area defined both vertically and laterally (such as a field) or for an individual well. An application for an areal variance need not be filed in conjunction with an individual permit application or application for permit amendment. Factors that may be considered by the **director** [commission or its delegate] in granting a variance include:

(A) [(i)] the area affected by pressure increases resulting from injection operations;

(B) [(ii)] the presence of local geological conditions that preclude movement of fluid that could endanger **underground sources of drinking water** [freshwater strata] or the surface; or

(C) [(iii)] other compelling evidence that the variance will not result in a material increase in the risk of fluid movement into **underground sources of drinking water** [freshwater strata] or to the surface.

(3) [(C)] Persons applying for a variance from the area-of-review requirements of **paragraph (1) of this subsection** [subparagraph (A) of this paragraph] on the basis of factors set out in **paragraph (2)(B) or (C) of this subsection** [subparagraph (B)(ii) or (iii) of this paragraph] for an individual well shall provide notice of the application **in accordance with subsection (e) of this section** [to those persons given notice under the provisions of paragraph (5)(A) of this subsection. The provisions

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of paragraph (5)(D) and (E) shall apply in the case of an application for a variance from the area-of-review requirements for an individual well].

(4) [(D)] **Individual and published notice** [Notice] of an application for an areal  
variance from the area-of-review requirements under **paragraph (1) of this subsection** [subparagraph  
(A) of this paragraph] shall be given on or before the date the application is filed with the commission. [:]

(A) [(A)] **Published notice. The applicant shall give notice** by publication once  
in a newspaper having general circulation in each county, or portion thereof, where the variance would  
apply. Such notice shall be in a form approved by the **director** [commission or its delegate] prior to  
publication and must be at least three inches by five inches in size. The notice shall state that protests to  
the application **shall be filed with the Commission in writing and that, unless the Commission**  
**receives a valid protest, the Commission may take final action on the application no fewer than 15**  
**days after the date the application is filed with the Commission or** [may be filed with the commission  
during the 15-day period following ] the date of publication, **whichever is later**. The notice shall appear  
in a section of the newspaper containing state or local news items. [ ;]

**(B) Individual notice.**

(i) [(ii)] **The applicant shall give individual notice** by mailing **by**  
**regular mail and certified mail return receipt requested, the following:** [or delivering]

(I) a copy of the **front and back of the** application;

(II) a map identifying the location of the proposed well,  
showing a north arrow; scale; geographic subdivisions appropriate for the scale; and by inset or  
otherwise, landmarks or other features such as roads and highways in relation to the proposed well  
in sufficient detail to allow a person to reasonably ascertain where an owned or occupied property  
is with respect to the proposed disposal well location; and

(III) the following notice, with the information relating to the  
application completed:

**Figure: 16 TAC §3.9(g)(4)(B)(i)(III)**

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**NOTICE OF APPLICATION FOR A DISPOSAL WELL PERMIT  
WITH EXCEPTIO**

Attached is a copy of an application for a disposal well permit under the Railroad Commission's Statewide Rule 9 (16 Texas Administrative Code §3.9), relating to Disposal Wells. [Company name and address] is applying to the Railroad Commission of Texas for a permit to dispose of produced saltwater or other oil and gas waste by well injection into a porous formation not productive of oil or gas. The applicant proposes to dispose of oil and gas waste into the [formation name]; [lease name]; [well number(s)]. The proposed disposal well is located at [address]; approximately [direction and number of miles from nearest town] in the [field name] in [County or Counties]. The water will be injected into strata in the subsurface depth interval from \_\_\_\_\_ to \_\_\_\_\_ feet. The applicant also has requested a variance from the area-of-review requirements in Statewide Rule 9(g)(1). The Commission's rules can be reviewed on the Commission's website at [www.rrc.state.tx.us](http://www.rrc.state.tx.us). Attached is a copy of the application form and a map identifying the location of the proposed well.

You are receiving this notice because you have been identified as a potentially affected person or local government to which 16 TAC §3.9(e) requires that the applicant for a disposal well permit provide notice.

If you have objections to the issuance of disposal well permit for this well, you may submit a letter of protest to the Director, Oil and Gas Division, Railroad Commission of Texas, 1701 North Congress Avenue, Austin, Texas 78711. Unless the Railroad Commission of Texas receives a protest to the application within 15 days of the date of this letter, the Commission may take final administrative action on the application; however, the Commission will consider any protest it receives up until the time the Commission takes final administrative action on the application.

Please be advised that the Railroad Commission of Texas does not have jurisdiction over roads, traffic, property values, zoning, noise, odors, esthetics, leasing, pipeline easements, or royalty payments.

**(ii) Individual notice shall be given to the following affected persons**

**and local governments:**

(I) ~~[the manager of]~~ each **groundwater** ~~[underground water]~~ conservation district(s) in which the variance would apply, if any;

(II) the city clerk or other appropriate official of each incorporated city in which the variance would apply, if any;

(III) the county clerk of each county in which the variance would apply; and

(IV) any other person or persons that the **director** ~~[commissioner or its delegate]~~ determine should receive notice of the application.

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(5) [(E)] If a protest to an application for an areal variance is made to the commission by an affected person, local government, **groundwater** [~~underground water~~] conservation district, or other state agency **prior to a final action on the application** [~~within 15 days of receipt of the application or of publication, whichever is later~~], or if the **director** [~~commission's delegate~~] determines that a hearing on the application is in the public interest, then a hearing will be held on the application after the commission provides notice of the hearing to all local governments, **groundwater** [~~underground water~~] conservation districts, state agencies, or other persons, who express an interest, in writing, in the application. If no protest from an affected person is received by the commission, the **director** [~~commission's delegate~~] may administratively approve the application. If the application is denied administratively, the person(s) filing the application shall have a right to hearing upon request. [~~After hearing, the examiner shall recommend a final action by the commission.~~]

(6) [(F)] An areal variance granted under the provisions of this paragraph may be modified, terminated, or suspended by the commission after notice and opportunity for hearing is provided to each person shown on commission records to operate an oil or gas lease in the area in which the proposed modification, termination, or suspension would apply. If a hearing on a proposal to modify, terminate, or suspend an areal variance is held, any applications filed subsequent to the date notice of hearing is given must include the area-of-review information required under **paragraph (1) of this subsection** [~~subparagraph (A) of this paragraph pending issuance of a final order~~].

(h) [(8)] Casing.

(1) Disposal wells shall be cased and the casing cemented in compliance with §3.13 of this title [(relating to Casing, Cementing, Drilling, and Completion Requirements)] in such a manner that the injected fluids will not endanger oil, gas, geothermal resources or **underground sources of drinking water** [~~freshwater resources~~].

**(2) The Commission shall not approve an application for a disposal well permit under this section for any well in which the surface casing is not set and cemented from the ground surface to the base of usable-quality water as determined by the Groundwater Advisory Unit.**

**(3) The Commission shall not approve an application for a disposal well permit under this section for any well in which the casing is not cemented across and extending at least 600 feet above the base of the deepest underground source of drinking water.**



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**(4) All wells to be permitted under this section shall comply with §3.11 of this title (relating to Inclination and Directional Surveys Required) and §3.12 of this title (relating to Directional Survey Company Report). If an inclination report filed in compliance with §3.11 of this title shows a cumulative displacement beyond the boundaries of the tract upon which the well is located, the operator shall run a directional survey in accordance with §3.12 of this title to demonstrate that the bottomhole is within the boundaries of the tract. If the directional survey indicates that the bottomhole is not within the boundaries of the tract, the permit is subject to suspension, modification, or termination pursuant to subsection (f) of this section.**

**(i) [(9)] Special equipment.**

**(1) [(A)]** Tubing and packer. Wells drilled or converted for disposal shall be equipped with tubing set on a mechanical packer. Packers shall be set no higher than 100 feet above the top of the permitted interval. For purposes of this section, the term "tubing" refers to a string of pipe through which injection may occur and which is neither wholly nor partially cemented in place. A string of pipe that is wholly or partially cemented in place is considered casing for purposes of this section.

**(2) [(B)]** Pressure valve. The wellhead shall be equipped with a pressure observation valve on the tubing and for each annulus of the well.

**(3) [(C)]** Exceptions. The director may grant an exception to any provision of this **subsection [paragraph]** upon proof of good cause **and payment of the fees required by §3.78 of this title**. If the director denies an exception, the operator shall have a right to a hearing upon request. After hearing, the examiner shall recommend a final action by the commission.

**(j) Permit conditions.**

**(1) Standard conditions.**

**(A) Injection must be through tubing set on a packer. The packer must be set no higher than 100 feet above the top of the permitted interval.**

**(B) The appropriate district office must be notified 48 hours prior to:**

**(i) running tubing and setting packer;**

**(ii) beginning any work over or remedial operation;**

**(iii) conducting any required pressure tests or surveys.**

**(C) The wellhead must be equipped with a pressure observation valve on the**

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1 tubing and for each annulus.

2 (D) If the disposal well is a new well that will be drilled, once the well is  
3 drilled, a log of the well from surface to total depth shall be submitted to the Commission. The  
4 formations behind the surface casing and any intermediate casing shall be open hole logged prior to  
5 setting the surface casing and intermediate casing. At a minimum, such logging shall consist of a  
6 spontaneous potential log, resistivity log, a natural gamma ray log, and a porosity log. An operator  
7 may request approval of an exception to this requirement by filing with the commission a written  
8 request for such approval providing all pertinent information to support the exception. In  
9 determining whether to grant an exception, the Commission may consider the availability and  
10 quality of existing logs for wells in close proximity to the well that is the subject of the exception  
11 request.

12 (E) Prior to beginning injection and subsequently after any work over, an  
13 annulus pressure test must be performed. The test pressure must equal the maximum authorized  
14 injection pressure or 500 psig, whichever is less, but must be at least 200 psig. The test must be  
15 performed and the results submitted in accordance with the instructions of Form H-5  
16 (Disposal/Injection Well Pressure Test Report).

17 (F) The injection pressure and injection volume must be monitored at least  
18 monthly and reported annually on Form H-10 (Annual Disposal/Injection Well Monitoring Report)  
19 to the Commission's Austin office.

20 (G) Within 30 days after completion, conversion to disposal, or any work  
21 over which results in a change in well completion, a new Form W-2 (Oil Well Potential Test,  
22 Completion or Recompletion Report, and Log) or Form G-1 (Gas Well Back Pressure Test,  
23 Completion or Recompletion Report, and Log) must be filed in duplicate with the appropriate  
24 district office to show the current completion status of the well. The date of the disposal well permit  
25 and the permit number must be included on the new Form W-2 or G-1.

26 (H) Unless the well is a commercial disposal well, a disposal well permit  
27 transfers from one operator to another upon approval of Form P-4 (Producer's Certificate of  
28 Compliance and Transportation Authority).

29 (I) Unless otherwise required by conditions of the permit, completion and

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1 operation of the well shall be in accordance with the information represented on the application  
2 (Form W-14).

3 (J) A permit will expire when the Form W-3 (Plugging Record) is filed with  
4 the Commission. Permits issued under this section for wells to be drilled or converted will expire  
5 three years from the date of issuance of the permit unless operations to drill or convert the well  
6 have commenced.

7 (K) If the well is a commercial disposal well, the operator shall be  
8 responsible for complying with the following requirements prior to beginning operations so as to  
9 assure that discharges of oil and gas waste will not occur:

10 (i) All collecting pits, skimming pits, or washout pits must be  
11 permitted under the requirements of §3.8 of this title (relating to Water Protection).

12 (ii) A catch basin constructed of concrete, steel, or fiberglass must be  
13 installed to catch oil and gas waste which may spill as a result of connecting and disconnecting  
14 hoses or other apparatus while transferring oil and gas waste from tank trucks to the disposal  
15 facility.

16 (iii) All fabricated waste storage and pretreatment facilities (tanks,  
17 separators, or flow lines) shall be constructed of steel, concrete, fiberglass, or other materials  
18 approved by the director. These facilities must be maintained so as to prevent discharges of oil and  
19 gas waste.

20 (iv) Dikes shall be placed around all waste storage, pretreatment, or  
21 disposal facilities. The dikes shall be designed so as to be able to contain a volume equal to the  
22 maximum holding capacity of all such facilities. Any liquids or wastes that do accumulate in the  
23 containment area shall be removed within 24 hours and disposed of in an authorized disposal  
24 facility.

25 (v) The facility shall have security to prevent unauthorized access.  
26 Access shall be secured by a 24-hour attendant, a fence and locked gate when unattended, or a key-  
27 controlled access system. For a facility without a 24-hour attendant, fencing shall be required  
28 unless terrain or vegetation prevents truck access except through entrances with lockable gates.

29 (vi) Each storage tank shall be equipped with a device (visual gauge

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or alarm) to alert drivers when each tank is within 130 barrels from being full.

**(L) If fluids are not confined to the permitted interval, then the operator shall not continue to inject until the fluid migration from such interval is eliminated.**

**(M) Failure to comply with all of the conditions of a permit issued under this section may result in the operator being referred to enforcement to consider assessment of administrative penalties as described in subsection (o) of this section and/or the termination of the permit.**

**(2) Special conditions. The Commission may include in a permit issued under this section any special conditions necessary to ensure the injection achieves the intent of this section as described in subsection (a) of this section. Such special conditions may include, but are not limited to, conditions related to injection volume, maximum operating surface injection pressure, monitoring, testing or injection interval.**

**(k) [(+0)] Well record. Within 30 days after the completion or conversion of a disposal well, the operator shall file with the Commission [in duplicate in the district office] a complete record of the well as required by §3.16 of this title (relating to Log and Completion or Plugging Report), showing [on the appropriate form which shows] the current completion.**

**(l) [(+1)] Monitoring and reporting.**

**(1) [(+A)] The operator shall monitor the injection pressure and injection rate of each disposal well on at least a monthly basis.**

**(2) [(+B)] The results of the monitoring shall be reported annually to the commission on Form H-10 (Annual Disposal/Injection Well Monitoring Report) [the prescribed form].**

**(3) [(+C)] All monitoring records shall be retained by the operator for at least five years.**

**(4) [(+D)] The operator shall report to the appropriate district office [District Office] within 24 hours any significant pressure changes or other monitoring data indicating the presence of leaks in the well or unconfined fluids.**

**(5) The director may require alternative tests, including, but not limited to, bottomhole pressure surveys and casing inspection logs.**

**(m) [(+2)] Mechanical integrity testing [Testing].**

**(1) [(+A)] Purpose. The mechanical integrity of a disposal well shall be evaluated by**

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conducting pressure tests to determine whether the well tubing, packer, or casing have sufficient mechanical integrity to meet the performance standards of this rule, or by alternative testing methods under **paragraph (5) of this subsection** [~~subparagraph (E) of this paragraph~~].

**(2) [(B)]** Applicability. Mechanical integrity of each disposal well shall be demonstrated in accordance with provisions of **paragraph (4) and paragraph (5) of this subsection** [~~subparagraph (D) and subparagraph (E) of this paragraph~~] prior to initial use. In addition, mechanical integrity shall be tested periodically thereafter as described in **paragraph (3) of this subsection** [~~subparagraph (C) of this paragraph~~]. **The operator of any well that fails a mechanical integrity test shall immediately notify the appropriate district office and shut-in the well until the well has been remediated, a successful mechanical integrity test completed on the well, and the director approves the results of the mechanical integrity test.**

**(3) [(C)]** Frequency.

**(A) [(i)]** Each disposal well completed with surface casing set and cemented through the entire interval of protected usable-quality water shall be tested for mechanical integrity at least once every five years.

**(B) [(ii)]** In addition to testing required under **subparagraph (A) of this paragraph** [~~clause (i)~~], each disposal well shall be tested for mechanical integrity after every workover of the well **that disturbs the seal between the tubing, packer, and casing or after any repair work has been performed on the casing.**

**(C) [(iii)]** A disposal well that is completed without surface casing set and cemented through the entire interval of protected usable-quality [~~ground~~] water shall be tested at the frequency prescribed in the disposal well permit.

**(D) [(iv)]** The **director** [~~commission or its delegate~~] may prescribe a schedule and mail notification to operators to allow for orderly and timely compliance with the requirements in **subparagraphs (A) and (B) of this paragraph** [~~clauses (i) and (ii) of this subparagraph~~]. Such testing schedule shall not apply to a disposal well for which a disposal well permit has been issued but the well has not been drilled or converted to disposal.

**(E) The director may grant an exception to this paragraph for a one-time period of no more than six months upon proof of good cause and payment of the fees required by**

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**§3.78 of this title. If the director denies an exception, the operator shall have a right to a hearing upon written request.**

**(4)** ~~[(D)]~~ Pressure tests.

**(A)** ~~[(i)]~~ Test pressure.

**(i)** ~~[(i)]~~ The test pressure for wells equipped to dispose through tubing and packer shall equal the maximum authorized injection pressure or 500 psig, whichever is less, but shall be at least 200 psig.

**(ii)** ~~[(ii)]~~ The test pressure for wells that are permitted for disposal through casing shall equal the maximum permitted injection pressure or 200 psig, whichever is greater.

**(B)** ~~[(ii)]~~ Pressure stabilization. The test pressure shall stabilize within 10% of the test pressure required in **subparagraph (A) of this paragraph** ~~[clause (i) of this subparagraph]~~ prior to commencement of the test.

**(C)** ~~[(iii)]~~ Pressure differential. A pressure differential of at least 200 psig shall be maintained between the test pressure on the tubing-casing annulus and the tubing pressure.

**(D)** ~~[(iv)]~~ Test duration. A pressure test shall be conducted for a duration of 30 minutes when the test medium is liquid or for 60 minutes when the test medium is air or gas.

**(E)** ~~[(v)]~~ Pressure recorder. Except for tests **performed on** ~~[witnessed by a commission representative or]~~ wells permitted for disposal through casing, a pressure recorder shall be used to monitor and record the tubing-casing annulus pressure during the test. The recorder clock shall not exceed 24 hours. The recorder scale shall be set so that the test pressure is 30 to 70% of full scale, unless otherwise authorized by the **director** ~~[commission or its delegate]~~.

**(F)** ~~[(vi)]~~ Test fluid.

**(i)** ~~[(i)]~~ The tubing-casing annulus fluid used in a pressure test shall be liquid for wells that inject liquid unless the **director** ~~[commission or its delegate]~~ authorizes the use of a different test fluid for good cause.

**(ii)** ~~[(ii)]~~ The tubing-casing annulus fluid used in a pressure test shall contain no additives that may affect the sensitivity or otherwise reduce the effectiveness of the test.

**(G)** ~~[(vii)]~~ Pressure test results. The **director** ~~[commission or its delegate]~~ will consider, in evaluating the results of a test, the level of pollution risk that loss of well integrity would

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cause. Factors that may be taken into account in assessing pollution risk include injection pressure, frequency of testing and monitoring, and whether there is sufficient surface casing to cover **the entire interval of protected** ~~[all zones containing]~~ usable-quality water. A pressure test may be rejected by the **director** ~~[commission or its delegate]~~ after consideration of the following factors:

(i) ~~[(F)]~~ the degree of pressure change during the test, if any;

(ii) ~~[(H)]~~ the level of risk to **underground sources of drinking water** ~~[usable-quality water]~~ if mechanical integrity of the well is lost; and

(iii) ~~[(H)]~~ whether circumstances surrounding the administration of the test make the test inconclusive.

(5) ~~[(E)]~~ Alternative testing methods.

~~[(i) As an alternative to the testing required in subparagraph (B) of this paragraph, the tubing-casing annulus pressure may be monitored and included on the annual monitoring report required by paragraph (11) of this section, with the authorization of the commission or its delegate and provided that there is no indication of problems with the well. Wells that are approved for tubing-casing annulus monitoring under this paragraph shall be tested in the manner provided under subparagraph (B) of this paragraph at least once every ten years after January 1, 1990.]~~

~~[(ii)]~~ The **director** ~~[commission or its delegate]~~ may grant an exception for viable alternative tests or surveys or may require alternative tests or surveys as a permit condition. **A request for an exception must include proof of good cause and payment of any fees required by §3.78 of this title.**

(6) ~~[(F)]~~ **Notice to district office.** The operator shall notify the appropriate district office at least 48 hours prior to the testing. Testing shall not commence before the end of the 48-hour period unless authorized by the district **director** ~~[office]~~.

(7) ~~[(G)]~~ **Test records.** A complete record of all tests shall be filed in duplicate in the **appropriate** district office on **Form H-5 (Disposal/Injection Well Pressure Test Report)** ~~[the appropriate form]~~ within 30 days after the testing. **The recorder chart shall be submitted to the Commission as an attachment to the Form H-5 (Disposal/Injection Well Pressure Test Report).**

(8) ~~[(H)]~~ **Alternate test frequency.** In the case of permits issued under this section ~~[prior to the effective date of this amendment]~~ which require pressure testing more frequently than once every

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five years, the **director** ~~[commission's delegate]~~ may, by letter of authorization, reduce the required frequency of pressure tests, provided that such tests are required at least once every three years. The commission shall consider the permit to have been amended to require pressure tests at the frequency specified in the letter of authorization.

**(9) Exceptions. The director may grant an exception to any provision of this subsection upon proof of good cause and payment of the fees required by §3.78 of this title. If the director denies an exception, the operator shall have a right to a hearing upon request. After hearing, the examiner shall recommend a final action by the commission.**

**(n) [(13)]** Plugging. Disposal wells shall be plugged upon abandonment in accordance with §3.14 of this title (relating to Plugging).

**(o) [(14)]** Penalties.

**(1) [(A)]** Violations of this section may subject the operator to penalties and remedies specified in **§3.107 of this title (relating to Penalty Guidelines for Oil and Gas Violations)**, the Texas Water Code, Chapter 27, and the Natural Resources Code, Title 3.

**(2) [(B)]** The certificate of compliance for any oil, gas, or geothermal resource well may be revoked in the manner provided in §3.73 of this title (relating to Pipeline Connection; Cancellation of Certification of Compliance; Severance) for violation of this section.

§3.36. Oil, Gas, or Geothermal Resource Operation in Hydrogen Sulfide Areas.

(a) Applicability. Each operator who conducts operations as described in paragraph (1) of this subsection shall be subject to this section and shall provide safeguards to protect the general public from the harmful effects of hydrogen sulfide. This section applies to both intentional and accidental releases of hydrogen sulfide.

(1) Operations including drilling, **completing**, working over, producing, injecting, gathering, processing, transporting, and storage of hydrocarbon fluids **or other fluids** that are part of, or directly related to, field production, transportation, and handling of hydrocarbon fluids, **or other fluids** that contain gas in the system which has hydrogen sulfide as a constituent of the gas, to the extent as specified in subsection (c) of this section~~[, general provisions]~~.

(2) This section shall not apply to:

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(A) operations involving processing oil, gas, ~~[or]~~ hydrocarbon fluids, **or other fluids** which are either an industrial modification or products from industrial modification, such as refining, petrochemical plants, or chemical plants;

(B) operations involving gathering, storing, and transporting stabilized liquid hydrocarbons;

(C) operations where the concentration of hydrogen sulfide in the system is less than 100 ppm.

**(3) API Publication RP-55, Recommended Practices for Oil and Gas Producing and Gas Processing Plant Operations Involving Hydrogen Sulfide, is referenced as a suggested guideline for operations subject to this section.**

(b) Definitions.

(1) - (12) (No change.).

(13) Definition of referenced organizations and publications.

(A) ANSI--American National Standard Institute, 1430 Broadway, New York, New York 10018, Table I, Standard **Z535.1, Marking Physical Hazards Safety Color Code (R2011, Reaffirmation of ANSI Z535.1-2006)** [253.1-1967].

(B) API--American Petroleum Institute, 300 Corrigan Tower Building, Dallas, Texas 75201, Publication API RP-49, **Recommended Practice for Drilling and Well Servicing Operations Involving Hydrogen Sulfide (3rd edition, 2001)**, Publication API RP-14E, **Recommended Practice for Design and Installation of Offshore Platform Piping Systems, (5th edition, 1991)**, Sections 1.7(c), **relating to Sulfide Stress Cracking**, 2.1(c), **relating to Sulfide Stress Cracking Service, and 4.7, relating to Special Requirements for Sulfide Stress Cracking Service; and RP-55, Recommended Practices for Oil and Gas Producing and Gas Processing Plant Operations Involving Hydrogen Sulfide (2nd edition, 1995).**

~~[(C) ASTM--American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania 19103, Standard D-2385-66].~~

**(C) [(D)] GPA--Gas Processors Association, 6526 E. 60th Street, [1812 First Place,] Tulsa, Oklahoma 74145 [74120], GPA Standard 2286-95, Tentative Method of Extended Analysis for Natural Gas and Similar Gaseous Mixtures by Temperature Programmed Gas**

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**Chromatography (1995)** [~~Plant Operation Test Manual C-1, GPA Publication 2265-68~~].

**(D) [(E)] NACE--National Association of Corrosion Engineers, 1440 South Creek Drive** [~~P.O. Box 1499~~], Houston, Texas **77084-4906** [~~77001~~], Standard **MR-0175, relating to Materials for Use in H2S-Containing Environments in Oil and Gas Production (2009 edition)** [~~MR-01-75~~].

**(E) [(F)] DOT--Department of Transportation, Office of Pipeline Safety, 1200 New Jersey Ave., SE** [~~400 Seventh Street, S.W.~~], Washington, D.C. 20590, Title 49, Code of Federal Regulations, Parts 192, **relating to Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards**, and 195, **relating to Transportation of Hazardous Liquids by Pipeline**.

**(F) [(G)] OSHA--Occupational Safety and Health Administration, United States Department of Labor, 200 Constitution Avenue, NW, Washington D.C. 20210** [~~20270~~], Title 29, Code of Federal Regulations, **Part 1910.145, relating to Specifications for accident prevention signs and tags** [~~Part 1910.145(c)(4)(i)~~].

**(G) [(H)] RRC--Railroad Commission of Texas, Gas Services** [~~Utilities~~] Division, P.O. **Box** [~~Drawer~~] 12967, Capitol Station, Austin, Texas 78711, Gas Utilities Dockets 446 and 183.

(c) General provisions.

(1) Each operator shall determine the hydrogen sulfide concentration in the gaseous mixture in the operation or system.

(A) Tests **conducted for the purpose of making this determination** shall be made in accordance with **GPA Standard 2286-95, Tentative Method of Extended Analysis for Natural Gas and Similar Gaseous Mixtures by Temperature Programmed Gas Chromatography** [~~standards as set by ASTM Standard D-2385-66, or GPA Plant Operation Test Manual C-1, GPA Publication 2265-68;~~] or other methods approved by the **director** [~~commission~~].

(B) Test of vapor accumulation in storage tanks may be made with industry accepted colormetric tubes.

(2) For all operations subject to this section, the radius of exposure shall be determined, except in the cases of storage tanks, by the following Pasquill-Gifford equations, or by other methods that have been approved by the **director** [~~commission~~].

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(A) - (B) (No change.)

(3) (No change.).

(4) For the drilling, **completion, recompletion, workover, or servicing** of a well in an area where insufficient data exists to calculate a radius of exposure, but where hydrogen sulfide may be expected, ~~[then]~~ a 100 ppm radius of exposure equal to 3,000 feet shall be assumed. **The Commission will consider a small radius** ~~[A lesser-assumed radius may be considered]~~ upon **the applicant's** written request setting out the justification ~~[for same]~~.

(5) Storage tank provision. **An operator need not determine a radius of exposure for storage tanks that are used** ~~[- storage tanks which are utilized]~~ as a part of a production operation, and **that** ~~[which]~~ are operated at or near atmospheric pressure, and where the vapor accumulation has a hydrogen sulfide concentration in excess of 500 ppm, **but such tanks** shall be subject to the following.

~~[(A) No determination of a radius of exposure shall be made for storage tanks as herein described.]~~

**(A) [(B)] Operators shall post a** ~~[A]~~ warning sign ~~[shall be posted]~~ on or within 50 feet of the facility to alert the general public of the potential danger.

**(B) [(C)] Operators shall install fencing** ~~[Fencing]~~ as a security measure ~~[is required]~~ when storage tanks are located inside the limits of a townsite or city, or where **the public may be exposed to the contents of the storage tanks** ~~[conditions cause the storage tanks to be exposed to the public]~~.

**(C) [(D)] Operators shall comply with the** ~~[The]~~ warning and marker **provisions in** ~~[provision;]~~ paragraph (6)(A)(i), (ii), and (iv) of this subsection.

**(D) [(E)] Operators shall comply with the** ~~[The]~~ certificate of compliance **provisions in** ~~[provision;]~~ subsection (d)(1) of this section.

(6) All operators whose operations are subject to this section, and where the 100 ppm radius of exposure is in excess of 50 feet, shall be subject to the following.

(A) Warning and marker provision.

(i) For above-ground and fixed surface facilities, the operator shall post, where permitted by law, clearly visible warning signs on access roads or public streets, or roads which provide direct access to facilities located within the area of exposure.

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(ii) In **public** [~~populated~~] areas, such as [~~cases of~~] townsites and cities where the use of signs is not considered to be acceptable, [~~then~~] an alternative warning plan may be approved upon written request to the **director** [~~commission~~].

(iii) For buried lines subject to this section, the operator shall comply with the following.

(I) A marker sign shall be installed at public road crossings.

(II) Marker signs shall be installed along the line, when it is located within a public area or along a public road, at intervals frequent enough in the judgment of the operator so as to provide warning to avoid the accidental rupturing of line by excavation.

(III) The marker sign shall contain sufficient information to establish the ownership and existence of the line and shall indicate by the use of the words "Poison Gas" that a potential danger exists. Markers installed in compliance with the regulations of the federal Department of Transportation **at 49 Code of Federal Regulations §192.707 or §195.410** shall satisfy the requirements of this provision. Marker signs installed prior to the effective date of this section shall be acceptable provided they indicate the existence of a potential hazard.

(iv) In satisfying the sign requirement of clause (i) of this subparagraph, the following will be acceptable.

(I) Sign of sufficient size to be readable at a reasonable distance from the facility.

(II) New signs constructed to satisfy this section shall use the language of "Caution" and "Poison Gas" with a black and yellow color contrast. Colors shall satisfy Table I of American National Standard Institute Standard **Z53.1** [~~253.1-1967~~]. Signs installed to satisfy this section are to be compatible with the regulations of the federal Occupational Safety and Health Administration **at 29 Code of Federal Regulations Part 1910.145**.

(III) Existing signs installed prior to the effective date of this section will be acceptable if they indicate the existence of a potential hazard.

(B) (No change.).

(C) Materials and equipment provision.

(i) For new construction or modification of facilities (including materials

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1 and equipment to be used in drilling, **completion** and workover operations) [~~completed or contemplated~~  
2 ~~subsequent to the effective date of this section~~], the metal components shall be those metals which have  
3 been selected and manufactured so as to be resistant to hydrogen sulfide stress cracking under the  
4 operating conditions for which their use is intended, provided that they satisfy the requirements described  
5 in [~~the latest editions of~~] NACE Standard **MR-0175** [~~MR-01-75~~] and API RP-14E, sections 1.7(c), 2.1(c),  
6 **and** 4.7. The handling and installation of materials and equipment used in hydrogen sulfide service are to  
7 be performed in such a manner so as not to induce susceptibility to sulfide stress cracking. Other materials  
8 which are nonsusceptible to sulfide stress cracking, such as fiberglass and plastics, may be used in  
9 hydrogen sulfide service provided such materials have been manufactured and inspected in a manner  
10 which will satisfy the latest published, applicable industry standard, specifications, or recommended  
11 practices.

12 (ii) Other materials and equipment (including materials and equipment  
13 used in drilling, **completion** and workover operations) which are not included within the provision of  
14 clause (i) of this subparagraph may be used for hydrogen sulfide service provided:

15 (I) such materials and equipment are proved, as the result of  
16 advancements in technology or as the result of control and knowledge of operating conditions (such as  
17 temperature and moisture content), to be suitable for the use intended and where such usage is  
18 technologically acceptable as good engineering practice; and

19 (II) the **director** [~~commission~~] has approved the use of said  
20 materials and **equipment** [~~equipments~~] for the specific uses after written application.

21 (iii) Existing facilities (including materials in present common usage for  
22 drilling, **completion** and workover operations in hydrogen sulfide areas) which are in operation prior to  
23 the effective date of this section, and where there has been no failure of existing equipment attributed to  
24 sulfide stress cracking, shall satisfy the requirements of this section.

25 (iv) In the event of a failure of any element of an existing system as the  
26 result of hydrogen sulfide stress cracking, the compliance status of the system shall be determined by the  
27 **director** [~~commission~~] after the operator has submitted to the **director** [~~commission~~] a detailed written  
28 report on the failure.

29 (7) All operations subject to subsection (a) of this section shall be subject to the

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1 additional control and equipment safety provision **in** [ ] paragraph (8) of this subsection [ ] and the  
2 contingency plan provision **in** [ ] paragraph (9) of this subsection, if any of the following conditions  
3 apply:

4 (A) - (C) (No change.)

5 (8) Control and equipment safety provision. Operators subject to this provision shall  
6 install safety devices and maintain them in an operable condition or shall establish safety procedures  
7 designed to prevent the undetected continuing escape of hydrogen sulfide. For intentional releases of a  
8 potentially hazardous volume of hydrogen sulfide gas, the gas must be flared unless permission to vent is  
9 obtained from the **director** [~~commission or its delegate~~]. Venting will be allowed only upon a showing  
10 that the venting will not pose an unreasonable risk of harm to the public.

11 (9) Contingency plan provision.

12 (A) All operators whose operations are subject to this provision shall develop a  
13 written contingency plan complete with all requirements before hydrogen sulfide operations are begun.

14 (B) The purpose of the contingency plan shall be to provide an organized plan of  
15 action for alerting and protecting the public prior to an intentional release, or following the accidental  
16 release of a potentially hazardous volume of hydrogen sulfide.

17 (C) The contingency plan shall be activated prior to an intentional release, or  
18 immediately upon the detection of an accidental release of a potentially hazardous volume of hydrogen  
19 sulfide.

20 (D) Conditions that might exist in each area of exposure shall be considered  
21 when preparing a contingency plan.

22 (E) The plan shall include instructions and procedures for alerting the general  
23 public and public safety personnel of the existence of an emergency.

24 (F) The plan shall include procedures for requesting assistance and for follow-up  
25 action to remove the public from an area of exposure.

26 (G) The plan shall include a call list which shall include the following as they  
27 may be applicable:

28 (i) local supervisory personnel;

29 (ii) county sheriff;

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- (iii) Department of Public Safety;
- (iv) city police;
- (v) ambulance service;
- (vi) hospital;
- (vii) fire department;
- (viii) doctors;
- (ix) contractors for supplemental equipment;
- (x) **the appropriate** district [~~Railroad Commission~~] office;
- (xi) the appropriate regional office of the Texas Commission on Environmental Quality or its successor agencies;
- (xii) other public agencies.

(H) The plan shall include a plat detailing the area of exposure. The plat shall include the locations of private dwellings or residential areas, public facilities, such as schools, business locations, public roads, or other similar areas where the public might reasonably be expected within the area of exposure.

(I) The plan shall include names and telephone numbers of residents within the area of exposure, except in cases where the reaction plan option has been approved by the **director** [~~commission~~] in accordance with subparagraph (L) of this paragraph.

(J) - (K) (No change.).

(L) In the event of a high density of population, or the case where the population density may be unpredictable, a reaction type of plan, in lieu of advance briefing for public notification, will be acceptable. The reaction plan option must be approved by the **director** [~~commission~~].

(M) (No change.).

(N) The **appropriate district office** [~~Railroad Commission District Office~~] shall be notified as follows if the contingency plan is activated:

(i) 12 hours in advance of an intentional release or as soon as a decision is made to release if such decision could not reasonably have been made more than 12 hours prior to the release;

(ii) immediately in the case of an accidental release;

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(iii) as soon as possible before or after an unplanned intentional release made in an emergency situation to prevent a possible uncontrolled release.

(O) - (P) (No change.).

(Q) **Operators** ~~[The plan]~~ shall **update the plans** ~~[be kept updated]~~ to insure **their** ~~[its]~~ current applicability. **Operators shall review the hydrogen sulfide contingency plan and make appropriate amendments as necessary at least once a year, upon a public infringement, or at any time an element addressed in the plan materially changes. If the commission determines that a hydrogen sulfide contingency plan is inadequate to protect public safety, the commission may require the person to add provisions to the plan or otherwise amend the plan as necessary to protect public safety.**

(10) Injection provision.

(A) Injection of fluids containing hydrogen sulfide shall not be allowed under the conditions specified in this provision unless first approved by the commission after public hearing:

(i) where injection fluid is a gaseous mixture, or would be a gaseous mixture in the event of a release to the atmosphere, and where the 100 ppm radius of exposure is in excess of 50 feet and includes any part of a public area except a public road; or, if the 500 ppm radius of exposure is in excess of 50 feet and includes any part of a public road; or if the 100 ppm radius of exposure is 3,000 feet or greater;

(ii) where the hydrogen sulfide content of the gas or gaseous mixture to be injected has been increased by a processing plant operation **or any process that increases the concentration of the hydrogen sulfide gas.**

(B) (No change.).

**(C) Notice of an application for an injection well for injection of fluids containing hydrogen sulfide shall be given as follows:**

**(i) Individual notice.**

**(I) Individual notice shall be given by mailing by certified mail, return receipt requested, the following:**

**(-a-) a copy of the front and back of the application;**

**(-b-) a map identifying the location of the proposed**

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well, showing a north arrow; scale; geographic subdivisions appropriate for the scale; and by inset or otherwise, landmarks or other features such as roads and highways in relation to the proposed well in sufficient detail to allow a person to reasonably ascertain where an owned or occupied property is with respect to the proposed disposal well location; and

(-c-) a letter explaining why the person received the notice and how he or she may submit a protest, as well as a statement that any protest to the application should be filed with the commission within 15 days of the date of the application is filed with the commission.

(II) Individual notice shall be given to the following affected persons and local governments:

(-a-) the city clerk or other appropriate official of each incorporated city in which the variance would apply, if any;

(-b-) the county clerk of each county in which the variance would apply; and

(-c-) any other person or persons that the director determines should receive notice of the application.

(ii) County notice. For each county that contains all or part of the area of influence of the proposed injection well, the applicant shall cause to be delivered to the county clerk no later than the first date of publication in that county a copy of the following items:

(I) a properly completed application; and

(II) a plat which meets the requirements of clause (v)(IV) of this subparagraph and identifies the boundaries of surveys and blocks or sections as appropriate within the area of influence;

(iii) Published notice. The applicant shall publish notice of the application in a newspaper of general circulation in each county that contains all or a portion of the area of influence of the proposed injection well. Such notice shall meet the requirements of clause (v) of this subparagraph and be published in a section of the newspaper containing news items of state or local interest.

(iv) Final action may not be taken on any application under this

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1 section until proof of notice, evidenced as follows, is provided:

2 (I) a return receipt from each county clerk with whom an  
3 application form and plat is required to be filed pursuant to clause (ii) of this subparagraph; and

4 (II) the full page or pages of the newspaper containing the  
5 published notice required under this subparagraph including the name of the paper, the date the  
6 notice was published, and the page number.

7 (v) The published notice of application shall be at least three inches  
8 by five inches in size, exclusive of the plat, and shall contain the following:

9 (I) the name, business address, and telephone number of the  
10 applicant and of the applicant's authorized representative, if any;

11 (II) a description of the geographic location of the proposed  
12 sour gas injection well and the area of influence, to the extent not clearly identified in the plat  
13 required to be published in subclause (IV) of this clause;

14 (III) the following statement, completed as appropriate:  
15 "This proposed injection well will inject fluids containing 100 parts per million, or more, of  
16 hydrogen sulfide. A copy of application forms and a map showing the location of the proposed  
17 injection well is available for public inspection at the offices of the (insert County name) County  
18 Clerk, located at the following address: (insert address of County Clerk). Any owner or occupant of  
19 land located within the area of influence of the proposed injection well desiring to protest this  
20 application can do so by mailing or otherwise delivering a letter referring to the application (by  
21 docket number if available) and stating their desire to protest to: Director, Oil and Gas Division,  
22 Railroad Commission of Texas, P.O. Box 12967, Austin, Texas 78711-2967. Protests shall be in  
23 writing and received by the Oil and Gas Division not later than (specify 30th day after the first date  
24 notice of the application is to be published). The letter shall include the name, address, and  
25 telephone number of every person on whose behalf the protest is filed and shall state the reasons  
26 each such person believes that he or she is the owner or occupant of property within the area of  
27 influence of the proposed injection well. It is recommended that a copy of this notice be included  
28 with the letter."; and

29 (IV) a plat identifying:

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**(-a-) the location of the proposed injection well;**

**(-b-) area of influence;**

**(-c-) north arrow;**

**(-d-) scale;**

**(-e-) geographic subdivisions appropriate for the  
scale; and**

**(-f-) by inset or otherwise, landmarks or other  
features such as roads and highways in relation to the proposed location of the injection well. These  
landmarks or other features shall be of sufficient detail to allow a person to reasonably ascertain  
whether an owned or occupied property that is within the area of influence of the proposed  
injection well.**

(11) In addition to any other requirements of this section, drilling, **completion** and workover operations, and gasoline plant sites where the 100 ppm radius of exposure is 50 feet or greater shall be subject to the following.

(A) Protective breathing equipment shall be maintained in two or more locations at the site.

(B) Wind direction indicators shall be installed at strategic locations at or near the site and be readily visible from the site.

(C) Automatic hydrogen sulfide detection and alarm equipment that will warn of the presence of hydrogen sulfide gas in concentrations that could be harmful shall be utilized at the site.

(12) Drilling provision. Drilling, **completion** and workover operations where the 100 ppm radius of exposure includes a public area or is 3,000 feet or greater shall be subject to the following additional provisions.

(A) Protective breathing equipment shall be maintained at the well site and shall be sufficient to allow for well control operations.

(B) The operator shall provide a method of igniting the gas in the event of an uncontrollable emergency.

(C) The operator shall install a choke manifold, mud-gas separator, and flare line, and provide a suitable method for lighting the flare.

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(D) Secondary remote control of blowout prevention and choke equipment to be located away from the rig floor at a safe distance from the wellhead.

(E) Drill stem testing of hydrogen sulfide zones is permitted only in daylight hours.

(F) The **appropriate** ~~[Railroad Commission]~~ district office shall be notified of the intention to conduct a drill stem test of a formation containing hydrogen sulfide in sufficient concentration to meet the requirements of this provision.

(G) A certificate of compliance shall be required on each well subject to this ~~section~~ ~~[provision]~~ even if well is located on certificated lease. **A certificate of compliance shall be required on each well subject to this section if the well is perforated in a field or zone that has been identified to contain a concentration of hydrogen sulfide 100 parts per million or greater, whether or not the perforations are for production or injection.**

(H) Full compliance with all the requirements of this provision must be satisfied before the well is drilled to a depth that is within 1,000 feet of the hydrogen sulfide zone. Alternate depths may be approved in advance by the appropriate ~~[commission]~~ district office.

(I) API Publication RP-49 is referenced as a suggested guideline for drilling, **completion** and workover of wells subject to this provision.

(J) Blowout preventers and well control systems shall be pressure tested at or near compliance depth or at depth of nearest bit change prior to reaching compliance depth. The appropriate ~~[Railroad Commission]~~ district office must be notified at least four hours prior to the test.

(13) - (14) (No change.).

(d) - (e) (No change.)

§3.46. Fluid Injection into Productive Reservoirs.

**(a) Intent; definitions.**

**(1) Intent. It is the intent of this section that the applicant demonstrates, and the director finds, that:**

**(A) the injected fluids will be confined to the permitted injection interval;**

**(B) all usable-quality water and underground sources of drinking water as**

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1 defined by the Commission's Groundwater Advisory Unit and §3.30(e)(7)(B) of this title (relating to  
2 Memorandum of Understanding between the Railroad Commission of Texas (RRC) and the Texas  
3 Commission on Environmental Quality (TCEQ)) will be isolated and sealed off to effectively  
4 prevent contamination and harm from migration of injected fluids or displaced formation fluids;

5 (C) all potentially productive zones and overpressured zones will be isolated  
6 and sealed off to prevent vertical migration of fluids or gases behind the casing; and

7 (D) the injection of fluids will not endanger or injure human health and  
8 safety.

9 (2) Definitions.

10 (A) Affected person--A person who has suffered or will suffer actual injury  
11 or economic damage other than as a member of the general public or as a competitor. The term  
12 includes surface owners of property on which a well is located and Commission-designated  
13 operators of wells located within one-half mile of a proposed disposal well.

14 (B) Commercial disposal well--A well whose owner or operator receives  
15 compensation from other operator(s) for the hauling and/or disposal of oil field fluids or oil and gas  
16 wastes that are wholly or partially trucked or hauled to the well.

17 (C) Director--The director of the Oil and Gas Division of the Railroad  
18 Commission of Texas or the director's delegate.

19 (D) Hauling of oil field fluids or oil and gas wastes--Transportation of oil  
20 field fluids or oil and gas wastes by truck or other vehicle other than a pipeline or a flowline.

21 (E) Orphaned well--A well issued a permit by Commission with no reported  
22 production or activity for the preceding 12 months and whose designated operator's organization  
23 report has become delinquent or inactive.

24 (F) Owner of record--Person or persons shown as an owner of a tract by  
25 public records including but not limited to deed records, tax records, appraisal district records, and  
26 probate records.

27 (b) [(a)] Permit required.

28 (1) Any person who engages in fluid injection operations in reservoirs productive of oil,  
29 gas, or geothermal resources must **apply for and** obtain a permit from the commission. [Permits may be

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1 issued when the injection will not endanger oil, gas, or geothermal resources or cause the pollution of  
2 freshwater strata unproductive of oil, gas, or geothermal resources. Permits from the commission issued  
3 before the effective date of this section shall continue in effect until revoked, modified, or suspended by  
4 the commission.]

5 **(2) Permit expiration.**

6 **(A) An injection well permit with a stated term expires on the last day of**  
7 **that term if, in the case of a new well, the operator has not spudded the well, or, in the case of the**  
8 **conversion of an existing well, the operator has not commenced operations on the well specific to**  
9 **the conversion of the well to injection.**

10 **(B) An injection well permit that does not contain a stated term or**  
11 **expiration date and that was issued prior to June 1, 2013, will expire on June 1, 2015, if the well has**  
12 **not been spudded or conversion operations commenced prior to that date.**

13 **(C) An injection well permit issued on or after June 1, 2013, that does not**  
14 **contain a stated term or expiration date will expire three years after the date the permit is issued if**  
15 **the well has not been spudded or conversion operations commenced prior to that date.**

16 **(3) The Commission shall not issue a permit for injection of fluids containing**  
17 **hydrogen sulfide unless the applicant also complies with the requirements of §3.36 of this title**  
18 **(relating to Oil, Gas, or Geothermal Resource Operation in Hydrogen Sulfide Areas).**

19 **(c) Geological requirements.**

20 **(1) Before any formations are approved for disposal use, the applicant shall show**  
21 **that the formations are separated from underground sources of drinking water by impervious beds**  
22 **which will give adequate protection to such underground sources of drinking water. The applicant**  
23 **shall show that such geologic separation consists of a minimum of 250 feet of impermeable strata**  
24 **between the base of usable-quality water and the top of the injection interval and that the 250 feet**  
25 **of impermeable strata includes at least one zone with a continuous thickness of at least 100 feet. In**  
26 **addition, the applicant shall show that there is a minimum of 100 feet of continuous impermeable**  
27 **strata between the base of the deepest underground source of drinking water and the top of the**  
28 **injection interval.**

29 **(2) The applicant must submit a letter from the Groundwater Advisory Unit of the**

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**Oil and Gas Division stating that the use of such formation will not endanger the usable-quality water in that area and that the formations to be used for disposal are not underground sources of drinking water. To obtain the Groundwater Advisory Letter, the applicant shall submit to the Groundwater Advisory Unit one copy of the completed Form H-1 (Application to Inject Fluid into a Reservoir Productive of Oil or Gas), a completed Form H-1A (Injection Well Data for H-1 Application), a plat with each survey identified, and a representative electrical log.**

**(d) [(b)] Filing of application.**

(1) Application. An application to conduct fluid injection operations in a reservoir productive of oil, gas, or geothermal resources shall be filed **with the Commission** in Austin [~~on the form prescribed by the commission accompanied by the prescribed fee~~]. On the same date, one copy **of the application** shall be filed with the appropriate district office. The form shall be executed by a **person** [~~party~~] having knowledge of the facts entered on the form. The applicant shall file the freshwater injection data form if fresh water is to be injected.

**(2) Fees. The applicant shall pay the fees prescribed in §3.78 of this title (relating to Fees and Financial Security Requirements).**

**(3) Required information and attachments. An application for an injection well under this section shall contain the following information and attachments:**

**(A) a completed Form H-1 (Application to Inject Fluid into a Reservoir Productive of Oil or Gas) and Form H-1A (Injection Well Data for H-1 Application);**

**(B) all required logs:**

**(I) if the application is for a new permit for an existing well, a complete electrical log of the proposed well or a complete log of a nearby well;**

**(II) if the application is for a new disposal well to be drilled, once the disposal well has been drilled, the permittee shall submit to the Commission a complete log of the well from surface to total depth. The formations behind the surface casing and any intermediate casing shall be open hole logged prior to setting the surface casing and intermediate casing;**

**(III) at a minimum, such logging shall consist of a spontaneous potential log, resistivity log, a natural gamma ray log, and a porosity log;**

**(IV) an operator may request approval of an exception to this**

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1 requirement by filing with the Commission a written request for such approval providing all  
2 pertinent information to support the exception. In determining whether to grant an exception, the  
3 Commission may consider the availability and quality of existing logs for wells in close proximity to  
4 the well that is the subject of the exception request;

5 (C) a letter from the Groundwater Advisory Unit stating the protection  
6 depth as defined by §3.13(a)(2)(C) of this title (relating to Casing, Cementing, Drilling, and  
7 Completion Requirements) to which usable-quality water must be protected, as determined by the  
8 Groundwater Advisory Unit to demonstrate that the well will not endanger usable-quality water, or  
9 stating that the formations or strata to be used for disposal are not underground sources of  
10 drinking water. The date of issuance of the letter from the Groundwater Advisory Unit shall be  
11 within five years of the date the injection well permit application is filed with the Commission;

12 (D) a map showing the location of all wells of public record within one-half  
13 mile radius of the proposed injection well. The map shall indicate the Commission-designated  
14 operator of each well within one-half mile of the proposed injection well location. For a commercial  
15 disposal well application, the map also must show the owner of record for the proposed injection  
16 well tract and the owner of record of the real property for surface tracts that adjoin the proposed  
17 injection well tract;

18 (E) a table of all wells of public record that penetrate the proposed injection  
19 interval and that are within a one-quarter mile radius of the proposed injection well. The table shall  
20 include the well identification, date drilled, total depth, current status, and the plugging dates of  
21 those wells that are plugged. The table shall identify any wells that are unplugged, improperly  
22 plugged, or orphaned and penetrate the proposed injection interval. In addition, the table shall  
23 identify any wells within the one-quarter mile radius that lack cement behind the casing through  
24 the proposed injection interval. Alternatively, an applicant may request a variance under  
25 subsection (g )(2) of this section;

26 (F) a list of the names and mailing addresses of all persons and local  
27 governments who were notified of the application as required by subsection (e)(2) of this section.  
28 and a signed statement attesting to notification of the listed persons and local governments;

29 (G) an affidavit of publication signed by the publisher that the notice

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**required by subsection (e)(3) of this section has been published in a newspaper of general circulation in the county where the disposal well will be located, including a newspaper clipping of the published notice. If the application is for a commercial disposal well, that fact must be stated in the published notice;**

**(H) any other technical information that the director may require as necessary to facilitate the review of the application. Such information may include a cement bond log, a cementing record, or a well bore sketch.**

**(4) Required information and attachments for amendment of an existing permit.**

**Figure: 16 TAC §3.46(d)(4)**

<b>Filing requirements</b>	<b>Amend injection interval</b>	<b>Amend injection pressure</b>	<b>Amend injection volume</b>	<b>Amend to commercial</b>
Application forms	Yes	Yes	Yes	Yes
Filing fees	Yes	Yes	Yes	Yes
Electric log	Yes, unless previously submitted	No	No	No
Groundwater Advisory Unit letter	Yes, unless previously submitted	No	No	No
Area of review: map of wells and table of wells	Yes, if current permit issued before April 1, 1982, or change is upheld	No	No	No
Step-rate test	No	Yes, if pressure is greater than 0.5 psi/foot of depth to top of the injection interval	No	No
Ownership survey map to show wells and operators within 1/2 mile radius	Yes	Yes	Yes	Yes

**(5) [(2)] Commercial disposal well. An applicant for a permit to dispose of oil and gas waste in a commercial disposal well shall clearly indicate on the application and in the notice of**

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1 application that the application is for a commercial disposal well permit. ~~[For the purposes of this rule,~~  
2 ~~"commercial disposal well" means a well whose owner or operator receives compensation from others for~~  
3 ~~the disposal of oil field fluids or oil and gas wastes that are wholly or partially trucked or hauled to the~~  
4 ~~well, and the primary business purpose for the well is to provide these services for compensation.]~~

5 **(e) [(c)]** Notice and opportunity for hearing.

6 (1) **Notice of new application.** The applicant shall give notice **as required by**  
7 **paragraph (2) of this subsection** by mailing **by regular mail and certified mail, return receipt**  
8 **requested, on the date the application is submitted to the Commission, the following:**

9 **(A) a [or delivering a] copy of the front and back of the** application;

10 **(B) a map identifying the location of the proposed well, showing a north**  
11 **arrow; scale; geographic subdivisions appropriate for the scale; and by inset or otherwise,**  
12 **landmarks or other features such as roads and highways in relation to the proposed well in**  
13 **sufficient detail to allow a person to reasonably ascertain where an owned or occupied property is**  
14 **with respect to the proposed injection well location; and**

15 **(C) the following notice, with the information relating to the specific**  
16 **application completed:**

17 **Figure: 16 TAC §3.46(e)(1)(C)**

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**NOTICE OF APPLICATION FOR AN INJECTION WELL PERMIT**

Attached is a copy of an application for an injection well permit under the Railroad Commission's Statewide Rule 46 (16 Texas Administrative Code §3.46), relating to Fluid Injection into Productive Reservoirs. [Company name and address] is applying to the Railroad Commission of Texas for a permit to inject fluid into a productive reservoir. The applicant proposes to inject fluid into the [formation name]; [lease name]; [well number(s)]. The proposed injection well is located at [address]; approximately [direction and number of miles from nearest town] in the [field name] in [County or Counties]. The fluid will be injected into strata in the subsurface depth interval from \_\_\_\_\_ to \_\_\_\_\_ feet. Attached is a copy of the application form and a map identifying the location of the proposed well.

You are receiving this notice because you have been identified as a potentially affected person or local government to which 16 TAC §3.46(e) requires that the applicant for an injection well permit provide notice.

If you have objections to the issuance of an injection well permit for this well, you may submit a letter of protest. Protests to the application from local government or persons who object and can show that they may be adversely affected, or requests for further information concerning any aspect of the application, should be submitted in writing to the Director, Oil and Gas Division, Railroad Commission of Texas, 1701 North Congress Avenue, Austin, Texas 78711. Unless the Commission receives a protest to the application, the director may take final administrative action on the application (e.g., approve, deny, return, or refer to hearing) no fewer than 15 days after the date the application is filed with the Commission.

Please be advised that the Railroad Commission of Texas does not have jurisdiction over roads, traffic, property values, zoning, noise, odors, esthetics, leasing, pipeline easements, or royalty payments.

**(2) Notice to individuals and local governments. On or not more than 30 days before the date the application is mailed to or filed with the commission, the applicant shall give notice of the application to the following affected persons and local governments: [who include]**

**(A) each [the] owner of record of the surface tract on which the well is located;**

**(B) each commission-designated operator of any well or any well for which an unexpired drilling permit has been issued located within one half mile of the proposed injection well;**

**(C) the county clerk of the county in which the well is located; [and]**

**(D) the city clerk or other appropriate city official of any city where the well is located within the municipal boundaries; [corporate limits of the city, on or before the date the application is mailed to or filed with the commission.]**

**(E) if the application is for [For the purposes of this section, the term "of**

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record" means recorded in the real property or probate records of the county in which the property is located.]

[~~(2) In addition to the requirements of subsection (c)(1);~~] a commercial disposal well permit, ~~[applicant shall give notice to]~~ owners of record of each surface tract that adjoins the proposed injection tract **and the groundwater conservation district, if the well is to be located in an area covered by a groundwater conservation district; and** ~~[by mailing or delivering a copy of the application to each such surface owner.]~~

**(F) [(3)] members of any other** ~~[If, in connection with a particular application, the commission or its delegate determines that another]~~ class of persons **the director determines, after review of the application, should receive notice of that application** ~~[should receive notice of the application, the commission or its delegate may require the applicant to mail or deliver a copy of the application to members of that class. Such classes of persons could include adjacent surface owners or underground water conservation districts].~~

**(3) [(4)] Notice by publication.**

**(A)** In order to give notice to other local governments, interested, or affected persons, notice of the application shall be published once by the applicant in a newspaper of general circulation for the county where the well will be located ~~[in a form approved by the commission or its delegate].~~ **If the application is for a commercial disposal well, that fact shall be stated in the published notice. Such notice shall be published no more than 30 days before the applicant submits the application to the Commission.**

**(B) The following notice, with the information relating to the specific application completed, shall be used:**

**Figure: 16 TAC §3.46(e)(3)(B)**

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**NOTICE OF APPLICATION FOR COMMERCIAL FLUID INJECTION WELL PERMIT**

[Company name and address] is applying to the Railroad Commission of Texas for a permit to inject oil and gas waste into a formation that is productive of oil and gas. The applicant proposes to inject oil and gas waste into the [formation name]; [lease name]; [well number(s)]. The proposed injection well is located at [address]; approximately [direction and number of miles from nearest town] in the [field name] in [County or Counties]. Oil and gas waste will be injected into strata in the subsurface depth interval from \_\_\_\_\_ to \_\_\_\_\_ feet.

**LEGAL AUTHORITY:** Texas Water Code, Chapter 27, as amended; Texas Natural Resources Code, Title 3, as amended; and the Railroad Commission's Oil and Gas Division Rules (Statewide Rules) at 16 Tex. Admin. Code, Chapter 3.

If you have objections to the issuance of a permit for this well, you may submit a letter of protest. Protests to the application from local government or persons who object and can show that they may be adversely affected, or requests for further information concerning any aspect of the application, should be submitted in writing to the Director, Oil and Gas Division, Railroad Commission of Texas, 1701 North Congress Avenue, Austin, Texas 78711. Unless the Commission receives a protest to the application, the director may take final administrative action on the application (e.g., approve, deny, return, or refer to hearing) no fewer than 15 days after the date the application is filed with the Commission.

Please be advised that the Railroad Commission of Texas does not have jurisdiction over roads, traffic, property values, zoning, noise, odors, esthetics, leasing, pipeline easements, or royalty payments.

(C) The applicant shall file with the commission in Austin proof of publication prior to the hearing or administrative approval. **The following affidavit of publication format may be used:**  
**Figure: 16 TAC §3.46(e)(3)(C)**

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Affidavit of Publication  
STATE OF TEXAS  
COUNTY OF \_\_\_\_\_

Before me, the undersigned authority, on this day personally appeared [name of person], the [title of person] of the [name of newspaper], a newspaper having general circulation in [name(s) of county(ies)] County(ies), Texas, who being by me duly sworn, deposes and says that the foregoing attached notice was published in said newspaper on the following date(s), to wit: [list all dates of publication].

[signature of person]  
[typed or printed name of person]

Subscribed and sworn to before me this the [day] of [month], [year], to certify which witness my hand and seal of office.

[signature of notary]  
[typed or printed name of notary]

Notary Public in and for  
[name of county] County, Texas

**(4) The Commission shall not issue a permit for injection of fluids containing hydrogen sulfide unless the applicant also complies with the requirements of §3.36 of this title (relating to Oil, Gas, or Geothermal Resource Operation in Hydrogen Sulfide Areas).**

**(5) Notice requirements for amended permit applications.**

**Figure: 16 TAC §3.46(e)(5)**

Notice Requirements for Amended Permit Applications				
Notify	Amend injection interval	Amend injection pressure	Amend injection volume	Amend to commercial
Operators of wells within 1/2 mile radius	Yes	Yes	Yes	Yes
Surface owner	Yes	Yes	Yes	Yes
Adjacent surface owners	No	No	No	Yes
County clerk	Yes	No	No	Yes

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City clerk	Yes, if within city limits	No	No	Yes, if within city limits
Groundwater conservation district	No	No	No	Yes
Publication	Yes	No	No	Yes, specify "commercial wells"

1           (6) [(5)] **Protested applications. The Commission shall not approve any application**  
2 **fewer than 15 days after notice has been given to all affected persons as required by this section. If**  
3 **the Commission receives a protest from an affected person or local government before the**  
4 **Commission staff takes final administrative action on an application or if the director determines**  
5 **that a hearing is in the public interest, then the Commission will hold a hearing on the application**  
6 **after giving notice of the hearing to the persons and entities specified in subsection (e)(2) of this**  
7 **section and any other person or entity that has expressed, in writing, an interest in the application.**  
8 **[:]**

9           ~~[(A) If a protest from an affected person or local government is made to the~~  
10 ~~commission within 15 days of receipt of the application or of publication, whichever is later, or if the~~  
11 ~~commission or its delegate determines that a hearing is in the public interest, then a hearing will be held~~  
12 ~~on the application after the commission provides notice of hearing to all affected persons, local~~  
13 ~~governments, or other persons, who express an interest, in writing, in the application.]~~

14           ~~[(B) For purposes of this section, "affected person" means a person who has~~  
15 ~~suffered or will suffer actual injury or economic damage other than as a member of the general public or~~  
16 ~~as a competitor, and includes surface owners of property on which the well is located and commission-~~  
17 ~~designated operators of wells located within one-half mile of the proposed disposal well.]~~

18           (7) [(6)] **Unprotested applications.** If no protest from an affected person **or local**  
19 **government** is received by the commission, the **director** ~~[commission's delegate]~~ may administratively  
20 approve the application **no fewer than 15 days from the date the commission received the application,**  
21 **the date of the required individual notice, or the date of publication, whichever is later.** If the  
22 **director** ~~[commission's delegate]~~ denies administrative approval, the applicant shall have a right to a

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hearing upon request. After hearing, the examiner shall recommend a final action by the commission.

**(f)** ~~[(d)]~~ Subsequent commission action.

(1) An injection well permit may be modified, suspended, or terminated by the commission for just cause after notice and opportunity for hearing, if:

(A) a material change of conditions occurs in the operation or completion of the injection well, or there are material changes in the information originally furnished;

(B) ~~[fresh water is likely to be polluted as a result of]~~ continued operation of the well **is likely to endanger underground sources of drinking water or human health or safety;**

(C) there are substantial violations of the terms and provisions of the permit or of commission rules;

(D) the applicant has **provided incorrect information, has failed to provide the required notice, or has** misrepresented any material facts during the permit issuance process;

(E) injected fluids are escaping from the permitted injection **interval** ~~[zone]~~; or

(F) waste of oil, gas, or geothermal resources is occurring or is likely to occur as a result of the permitted operations.

(2) **Except for commercial disposal well permits, an** ~~[An]~~ injection well permit may be transferred from one operator to another operator **by filing Form P-4 (Producer's Certificate of Compliance and Transportation Authority), unless** ~~[provided that]~~ the **director notifies** ~~[commission's delegate does not notify]~~ the present permit holder of an objection to the transfer prior to the date the lease is transferred on commission records. **Transfer of a commercial disposal well permit requires written approval by the director after an inspection and a review that confirms compliance with a permit issued under this section and applicable Commission rules.**

(3) Voluntary permit suspension.

(A) An operator may apply to temporarily suspend its injection authority by filing a written request for permit suspension with the commission in Austin, and attaching to the written request the results of an MIT test performed during the previous three-month period in accordance with the provisions of subsection **(m)(4)** ~~[(j)(4)]~~ of this section. The provisions of this paragraph shall not

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1 apply to any well that is permitted as a commercial injection well.

2 (B) The **director** ~~[commission or its delegate]~~ may grant the permit suspension  
3 upon determining that the results of the MIT test submitted under subparagraph (A) of this paragraph  
4 indicate that the well meets the performance standards of subsection **(m)(4)** ~~[(j)(4)]~~ of this section.

5 (C) During the period of permit suspension, the operator shall not use the well for  
6 injection or disposal purposes.

7 (D) During the period of permit suspension, the operator shall comply with all  
8 applicable well testing requirements of §3.14 of this title (relating to **Plugging** ~~[plugging, and commonly~~  
9 ~~referred to as Statewide Rule 14]~~) but need not perform the MIT test that would otherwise be required  
10 under the provisions of subsection **(m)(4)** ~~[(j)(4)]~~ of this section or the permit. Further, during the period  
11 of permit suspension, the provisions of subsection (i)(1) - (3) of this section shall not apply.

12 (E) The operator may reinstate injection authority under a suspended permit by  
13 filing a written notification with the commission in Austin. The written notification shall be accompanied  
14 by an MIT test performed during the three-month period prior to the date notice of reinstatement is filed.  
15 The MIT test shall have been performed in accordance with the provisions and standards of subsection  
16 **(m)(4)** ~~[(j)(4)]~~ of this section.

17 **(g)** ~~[(e)]~~ Area of Review.

18 (1) Except as otherwise provided in this subsection, the applicant shall review the ~~[data~~  
19 ~~of]~~ public record for wells that penetrate the proposed **injection interval** ~~[disposal zone]~~ within a 1/4 mile  
20 radius of the proposed **injection** ~~[disposal]~~ well to determine if all abandoned wells have been plugged in  
21 a manner that will prevent the movement of fluids from the **injection interval** ~~[disposal zone]~~ into  
22 **underground sources of drinking water** ~~[freshwater strata]~~. The applicant shall identify in the  
23 application any wells which appear from such review of public records to be unplugged or improperly  
24 plugged and any other unplugged or improperly plugged wells of which the applicant has actual  
25 knowledge. **The Commission shall not approve a permit application under this section for an**  
26 **injection well for which the area of review includes any orphaned wells. The applicant shall review**  
27 **the public record for wells that penetrate the proposed injection interval within a 1/4 mile radius of**

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1 **the proposed injection well to determine if all wells are cemented across the injection interval in**  
2 **such a manner to prevent the movement of fluids from the injection interval into underground**  
3 **sources of drinking water.**

4 (2) The **director** ~~[commission or its delegate]~~ may grant a variance from the area-of-  
5 review requirements of paragraph (1) of this subsection upon proof that the variance will not result in a  
6 material increase in the risk of fluid movement into **underground sources of drinking water** ~~[freshwater~~  
7 ~~strata]~~ or to the surface. Such a variance may be granted for an area defined both vertically and laterally  
8 (such as a field) or for an individual well. An application for an areal variance need not be filed in  
9 conjunction with an individual permit application or application for permit amendment. Factors that may  
10 be considered by the **director** ~~[commission or its delegate]~~ in granting a variance include:

11 (A) the area affected by pressure increases resulting from injection operations;

12 (B) the presence of local geological conditions that preclude movement of fluid  
13 that could endanger **underground sources of drinking water** ~~[freshwater strata]~~ or the surface; or

14 (C) other compelling evidence that the variance will not result in a material  
15 increase in the risk of fluid movement into **underground sources of drinking water** ~~[freshwater strata]~~  
16 or to the surface.

17 (3) Persons applying for a variance from the area-of-review requirements of paragraph  
18 (1) of this subsection on the basis of factors set out in paragraph (2)(B) or (C) of this subsection for an  
19 individual well shall provide notice of the application **in accordance with subsection (e) of this section**  
20 ~~[to those persons given notice under the provisions of subsection (c)(1) of this section. The provisions of~~  
21 ~~subsection (c) of this section shall apply in the case of an application for a variance from the area-of-~~  
22 ~~review requirements for an individual well].~~

23 (4) **Individual and published notice** ~~[Notice]~~ of an application for an areal variance  
24 from the area-of-review requirements under paragraph (1) of this subsection shall be given on or before  
25 the date the application is filed with the commission. ~~[ : ]~~

26 (A) **Published notice. The application shall give notice** by publication once in  
27 a newspaper having general circulation in each county, or portion thereof, where the variance would

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1 apply. Such notice shall be in a form approved by the **director** ~~[commission or its delegate]~~ prior to  
2 publication and must be at least three inches by five inches in size. The notice shall state that protests to  
3 the application **shall be filed with the Commission in writing and that, unless the Commission**  
4 **receives a protest to the application, the Commission may take final action on the application no**  
5 **fewer than 15 days after** ~~[may be filed with the commission during the 15-day period following]~~ the  
6 date of publication, **whichever is later**. The notice shall appear in a section of the newspaper containing  
7 state or local news items. ~~[ ; ]~~

8 (B) **Individual notice.**

9 (i) **The applicant shall give individual notice** by mailing **by regular**  
10 **mail and certified mail, return receipt requested:** ~~[or delivering]~~

11 (I) a copy of the **front and back of the** application;

12 (II) **a map identifying the location of the proposed injection**  
13 **well, showing a north arrow; scale; geographic subdivisions appropriate for the scale; and by inset**  
14 **or otherwise, landmarks or other features such as roads and highways in relation to the proposed**  
15 **well in sufficient detail to allow a person to reasonably ascertain where an owned or occupied**  
16 **property is with respect to the proposed injection well location; and**

17 (III) **the following notice, with the information relating to the**  
18 **specific application completed** ~~[, along with a statement that any protest to the application should be~~  
19 ~~filed with the commission within 15 days of the date the application is filed with the commission, to the~~  
20 ~~following]:~~

21 **Figure: 16 TAC §3.46(g)(4)(B)(i)(III)**

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**NOTICE OF APPLICATION FOR AN INJECTION WELL PERMIT  
WITH EXCEPTION TO AREA-OF-REVIEW REQUIREMENTS**

Attached is a copy of an application for an injection well permit under the Railroad Commission's Statewide Rule 46 (16 Texas Administrative Code §3.46), relating to Fluid Injection into Productive Reservoirs. [Company name and address] is applying to the Railroad Commission of Texas for a permit to inject fluid. The applicant proposes to inject fluid into the [formation name]; [lease name]; [well number(s)]. The proposed injection well is located at [address]; approximately [direction and number of miles from nearest town] in the [field name] in [County or Counties]. The fluid will be injected into strata in the subsurface depth interval from \_\_\_\_\_ to \_\_\_\_\_ feet. The applicant also has requested a variance from the area-of-review requirements in Statewide Rule 46(g)(1). The Commission's rules can be reviewed on the Commission's website at [www.rrc.state.tx.us](http://www.rrc.state.tx.us). Attached is a copy of the application form and a map identifying the location of the proposed well.

You are receiving this notice because you have been identified as a potentially affected person or local government to which 16 TAC §3.46(e) requires that the applicant for an injection well permit provide notice.

If you have objections to the issuance of an injection well permit for this well, you may submit a letter of protest to the Director, Oil and Gas Division, Railroad Commission of Texas, 1701 North Congress Avenue, Austin, Texas 78711. Unless the Railroad Commission of Texas receives a protest to the application within 15 days of the date of this letter, the Commission may take final administrative action on the application; however, the Commission will consider any protest it receives up until the time the Commission takes final administrative action on the application.

Please be advised that the Railroad Commission of Texas does not have jurisdiction over roads, traffic, property values, zoning, noise, odors, esthetics, leasing, pipeline easements, or royalty payments.

**(ii) Individual notice shall be given to the following affected persons**

**and local governments:**

**(I)** ~~[(i) the manager of]~~ each **groundwater** ~~[underground water]~~ conservation district in which the variance would apply, if any;

**(II)** ~~[(ii)]~~ the city clerk or other appropriate official of each incorporated city in which the variance would apply, if any;

**(III)** ~~[(iii)]~~ the county clerk of each county in which the variance would apply; and

**(IV)** ~~[(iv)]~~ any other **class of** person or persons that the **director**

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1 ~~[commission or its delegate]~~ determines should receive notice of the application.

2 (5) If a protest to an application for an areal variance is made to the commission by an  
3 affected person, local government, **groundwater** ~~[underground water]~~ conservation district, or other state  
4 agency **prior to the commission taking final action on the application** ~~[within 15 days of receipt of the~~  
5 ~~application or of publication, whichever is later]~~, or if the **director** ~~[commission's delegate]~~ determines  
6 that a hearing on the application is in the public interest, then a hearing will be held on the application  
7 after the commission provides notice of the hearing to all local governments, **groundwater** ~~[underground~~  
8 ~~water]~~ conservation districts, state agencies, or other persons, who express an interest, in writing, in the  
9 application. If no protest from an affected person is received by the commission, the **director**  
10 ~~[commission's delegate]~~ may administratively approve the application. If the application is denied  
11 administratively, the person(s) filing the application shall have a right to hearing upon request. ~~[After~~  
12 ~~hearing, the examiner shall recommend a final action by the commission.]~~

13 (6) An areal variance granted under the provisions of this subsection may be modified,  
14 terminated, or suspended by the commission after notice and opportunity for hearing is provided to each  
15 person shown on commission records to operate an oil or gas lease in the area in which the proposed  
16 modification, termination, or suspension would apply. If a hearing on a proposal to modify, terminate, or  
17 suspend an areal variance is held, any applications filed subsequent to the date notice of hearing is given  
18 must include the area-of-review information required under paragraph (1) of this subsection pending  
19 issuance of a final order.

20 **(f) [(h)]** Casing.

21 (1) Injection wells shall be cased and the casing cemented in compliance with §3.13 of  
22 this title ~~[(relating to Casing, Cementing, Drilling, and Completion Requirements)]~~ in such a manner that  
23 the injected fluids will not endanger oil, gas, or geothermal resources and will not endanger **formations**  
24 **that contain underground sources of drinking water** ~~[freshwater formations]~~ not productive of oil, gas,  
25 or geothermal resources.

26 **(2) The Commission shall not approve an application for an injection well permit**  
27 **under this section for any well in which the surface casing is not set and cemented from the ground**

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surface to the base of usable-quality water as determined by the Groundwater Advisory Unit.

**(3) The Commission shall not approve an application for an injection well permit under this section for any well in which the casing is not cemented across and extending at least 600 feet above the base of the deepest underground source of drinking water.**

**(4) All wells to be permitted under this section shall comply with §3.11 of this title (relating to Inclination and Directional Surveys Required) and §3.12 of this title (relating to Directional Survey Company Report). If an inclination report filed in compliance with §3.11 of this title shows a cumulative displacement beyond the boundaries of the tract upon which the well is located, the operator shall run a directional survey in accordance with §3.12 of this title to demonstrate that the bottomhole is within the boundaries of the tract.**

**(i) [(g)] Special equipment.**

(1) Tubing and packer. Wells drilled or converted for injection shall be equipped with tubing set on a mechanical packer. Packers shall be set no higher than 200 feet below the known top of cement behind the long string casing but in no case higher than 150 feet below the base of **usable-quality** ~~[usable-quality]~~ water. For purposes of this section, the term "tubing" refers to a string of pipe through which injection may occur and which is neither wholly nor partially cemented in place. A string of pipe that is wholly or partially cemented in place is considered casing for purposes of this section.

(2) Pressure valve. The wellhead shall be equipped with a pressure observation valve on the tubing and for each annulus of the well.

(3) Exceptions. The **director** ~~[commission or its delegate]~~ may grant an exception to any provision of this paragraph upon proof of good cause **and payment of the fees required by §3.78 of this title**. If the **director** ~~[commission or its delegate]~~ denies an exception, the operator shall have a right to a hearing upon request. After hearing, the examiner shall recommend a final action by the commission.

**(j) Permit conditions.**

**(1) Standard conditions.**

**(A) Injection must be through tubing set on a packer. The packer must be set no higher than 100 feet above the top of the permitted interval.**

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1                   **(B) The appropriate district office must be notified 48 hours prior to:**

2                               **(i) running tubing and setting packer;**

3                               **(ii) beginning any work over or remedial operation;**

4                               **(iii) conducting any required pressure tests or surveys.**

5                   **(C) The wellhead must be equipped with a pressure observation valve on the**  
6 **tubing and for each annulus.**

7                   **(D) If the injection well is a new well that will be drilled, once the well is**  
8 **drilled, a log of the well from surface to total depth shall be submitted to the Commission. The**  
9 **formations behind the surface casing and any intermediate casing shall be open hole logged prior to**  
10 **setting the surface casing and intermediate casing. At a minimum, such logging shall consist of a**  
11 **spontaneous potential log, resistivity log, a natural gamma ray log, and a porosity log. An operator**  
12 **may request approval of an exception to this requirement by filing with the Commission a written**  
13 **request for such approval providing all pertinent information to support the exception. In**  
14 **determining whether to grant an exception, the Commission may consider the availability and**  
15 **quality of existing logs for wells in close proximity to the well that is the subject of the exception**  
16 **request**

17                   **(E) Prior to beginning injection and subsequently after any work over, an**  
18 **annulus pressure test must be performed. The test pressure must equal the maximum authorized**  
19 **injection pressure or 500 psig, whichever is less, but must be at least 200 psig. The test must be**  
20 **performed and the results submitted in accordance with the instructions of Form H-5**  
21 **(Disposal/Injection Well Pressure Test Report).**

22                   **(F) The injection pressure and injection volume must be monitored at least**  
23 **monthly and reported annually on Form H-10 (Annual Disposal/Injection Well Monitoring Report)**  
24 **to the commission's Austin office.**

25                   **(G) Within 30 days after completion, conversion to disposal, or any work**  
26 **over which results in a change in well completion, a new Form W-2 (Oil Well Potential Test,**  
27 **Completion or Recompletion Report, and Log) or Form G-1 (Gas Well Back Pressure Test,**

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1 Completion or Recompletion Report, and Log) must be filed in duplicate with the appropriate  
2 district office to show the current completion status of the well. The date of the disposal well permit  
3 and the permit number must be included on the new Form W-2 or G-1.

4 (H) Unless the well is a commercial disposal well, an injection well permit  
5 transfers from one operator to another upon approval of Form P-4 (Producer's Certificate of  
6 Compliance and Transportation Authority).

7 (I) Unless otherwise required by conditions of the permit, completion and  
8 operation of the well shall be in accordance with the information represented on the application  
9 (Form W-14).

10 (J) A permit will expire when the Form W-3 (Plugging Record) is filed with  
11 the Commission. Permits issued under this section for wells to be drilled or converted will expire  
12 three years from the date of the permit unless operations to drill or convert have commenced.

13 (K) If the well is a commercial disposal well, the operator shall be  
14 responsible for complying with the following requirements prior to beginning operations so as to  
15 assure that discharges of oil and gas waste will not occur:

16 (i) All collecting pits, skimming pits, or washout pits must be  
17 permitted under the requirements of §3.8 of this title (relating to Water Protection).

18 (ii) A catch basin constructed of concrete, steel, or fiberglass must be  
19 installed to catch oil and gas waste which may spill as a result of connecting and disconnecting  
20 hoses or other apparatus while transferring oil and gas waste from tank trucks to the disposal  
21 facility.

22 (iii) All fabricated waste storage and pretreatment facilities (tanks,  
23 separators, or flow lines) shall be constructed of steel, concrete, fiberglass, or other materials  
24 approved by the director. These facilities must be maintained so as to prevent discharges of oil and  
25 gas waste.

26 (iv) Dikes shall be placed around all waste storage, pretreatment, or  
27 disposal facilities. The dikes shall be designed so as to be able to contain a volume equal to the

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maximum holding capacity of all such facilities. Any liquids or wastes that do accumulate in the containment area shall be removed within 24 hours and disposed of in an authorized disposal facility.

(v) The facility shall have security to prevent unauthorized access. Access shall be secured by a 24-hour attendant, a fence and locked gate when unattended, or a key-controlled access system. For a facility without a 24-hour attendant, fencing shall be required unless terrain or vegetation prevents truck access except through entrances with lockable gates.

(vi) Each storage tank shall be equipped with a device (visual gauge or alarm) to alert drivers when each tank is within 130 barrels from being full.

(L) If fluids are not confined to the permitted interval, then the operator shall not continue to inject until the fluid migration from such interval is eliminated.

(M) Failure to comply with all of the conditions of a permit issued under this section may result in the operator being referred to enforcement to consider assessment of administrative penalties as described in subsection (o) of this section and/or the termination of the permit.

(2) Special conditions. The Commission may include in the permit any special conditions necessary to ensure the injection achieves the intent of this section as described in subsection (a) of this section. Such special conditions may include, but are not limited to, conditions related to injection volume, maximum operating surface injection pressure, monitoring, testing or injection interval.

(k) [(h)] Well record. Within 30 days after the completion or conversion of an injection well, the operator shall file **with the Commission** [in duplicate in the district office] a complete record of the well as required by §3.16 of this title (relating to Log and Completion or Plugging Report), showing [on the appropriate form which shows] the current completion.

(l) [(i)] Monitoring and reporting.

(1) The operator shall monitor the injection pressure and injection rate of each injection well on at least a monthly basis.

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(2) The results of the monitoring shall be reported annually to the commission on **Form H-10 (Annual Disposal/Injection Well Monitoring Report)** ~~[the prescribed form]~~.

(3) All monitoring records shall be retained by the operator for at least five years.

(4) The operator shall report to the appropriate **district office** ~~[District Office]~~ within 24 hours any significant pressure changes or other monitoring data indicating the presence of leaks in the well.

**(5) The director may require alternative tests, including, but not limited to, bottomhole pressure surveys and casing inspection logs.**

**(m) [(j)] Mechanical integrity testing [Testing].**

(1) Purpose. The mechanical integrity of an injection well shall be evaluated by conducting pressure tests to determine whether the well tubing, packer, or casing have sufficient mechanical integrity to meet the performance standards of this rule, or by alternative testing methods under paragraph (5) of this subsection.

(2) Applicability. Mechanical integrity of each injection well shall be demonstrated in accordance with provisions of paragraphs (4) and (5) of this subsection prior to initial use. In addition, mechanical integrity shall be tested periodically thereafter as described in paragraph (3) of this subsection. **The operator of any well that fails a mechanical integrity test shall immediately notify the appropriate district office and shut-in the well until the well has been remediated, a successful mechanical integrity test completed on the well, and the director approves the results of the mechanical integrity test.**

(3) Frequency.

(A) Each injection well completed with surface casing set and cemented through the entire interval of protected usable-quality water shall be tested for mechanical integrity at least once every five years.

(B) In addition to testing required under subparagraph (A), each injection well shall be tested for mechanical integrity after every workover of the well **that disturbs the seal between the tubing, packer, and casing or after any repair work has been performed on the casing.**

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(C) An injection well that is completed without surface casing set and cemented through the entire interval of protected usable-quality ~~ground~~ water shall be tested at the frequency prescribed in the injection permit.

(D) The **director** ~~[commission or its delegate]~~ may prescribe a schedule and mail notification to operators to allow for orderly and timely compliance with the requirements in subparagraph (A) and subparagraph (B) of this paragraph. Such testing schedule shall not apply to an injection well for which an injection well permit has been issued but the well has not been drilled or converted to injection.

**(E) The director may grant an exception to this paragraph for a one-time period of no more than six months upon proof of good cause and payment of the fees required by §3.78 of this title. If the director denies an exception, the operator shall have a right to a hearing upon written request.**

(4) Pressure tests.

(A) Test pressure.

(i) The test pressure for wells equipped to inject through tubing and packer shall equal the maximum authorized injection pressure or 500 psig, whichever is less, but shall be at least 200 psig.

(ii) The test pressure for wells that are permitted for injection through casing shall equal the maximum permitted injection pressure or 200 psig, whichever is greater.

(B) Pressure stabilization. The test pressure shall stabilize within 10% of the test pressure required in subparagraph (A) of this paragraph prior to commencement of the test.

(C) Pressure differential. A pressure differential of at least 200 psig shall be maintained between the test pressure on the tubing-casing annulus and the tubing pressure.

(D) Test duration. A pressure test shall be conducted for a duration of 30 minutes when the test medium is liquid or for 60 minutes when the test medium is air or gas.

(E) Pressure recorder. Except for tests **performed on** ~~[witnessed by a commission representative or]~~ wells permitted for injection through casing, a pressure recorder shall be

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used to monitor and record the tubing-casing annulus pressure during the test. The recorder clock shall not exceed 24 hours. The recorder scale shall be set so that the test pressure is 30 to 70% of full scale, unless otherwise authorized by the **director** [~~commission or its delegate~~].

(F) Test fluid.

(i) The tubing-casing annulus fluid used in a pressure test shall be liquid for wells that inject liquid unless the **director** [~~commission or its delegate~~] authorizes use of a different test fluid for good cause.

(ii) The tubing-casing annulus fluid used in a pressure test shall contain no additives that may affect the sensitivity or otherwise reduce the effectiveness of the test.

(G) Pressure test results. The **director** [~~commission or its delegate~~] will consider, in evaluating the results of a test, the level of pollution risk that loss of well integrity would cause. Factors that may be taken into account in assessing pollution risk include injection pressure, frequency of testing and monitoring, and whether there is sufficient surface casing to cover **the entire interval of protected** [~~all zones containing~~] usable-quality water. A pressure test may be rejected by the **director** [~~commission or its delegate~~] after consideration of the following factors:

(i) the degree of pressure change during the test, if any;

(ii) the level of risk to **underground sources of drinking water** [~~usable-quality water~~] if mechanical integrity of the well is lost; and

(iii) whether circumstances surrounding the administration of the test make the test inconclusive.

(5) Alternative testing methods.

(A) As an alternative to the testing required in paragraph (2) of this subsection, the tubing-casing annulus pressure may be monitored and included on the annual monitoring report required by subsection (i) of this section, with the authorization of the **director** [~~commission or its delegate~~] and provided that there is no indication of problems with the well **and provided the well is not a disposal well**. Wells that are approved for tubing-casing annulus monitoring under this paragraph shall be tested in the manner provided under paragraph (3) of this subsection at least once every ten years after

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(B) The **director** ~~[commission or its delegate]~~ **may** grant an exception for viable alternative tests or surveys or may require alternative tests or surveys as a permit condition. **A request for an exception must include proof of good cause and payment of any fees required by §3.78 of this title.**

(6) **Notice to district office.** The operator shall notify the appropriate district office at least 48 hours prior to the testing. Testing shall not commence before the end of the 48-hour period unless authorized by the district office.

(7) **Test records.** A complete record of all tests shall be filed in duplicate in the **appropriate** district office **on Form H-5 (Disposal/Injection Well Pressure Test Report)** within 30 days after the testing. **The recorder chart shall be submitted to the commission as an attachment to Form H-5.**

(8) **Alternate test frequency.** In the case of permits issued under this section ~~[prior to the effective date of this amendment]~~ which require pressure testing more frequently than once every five years, the **director** ~~[commission's delegate]~~ may, by letter of authorization, reduce the required frequency of pressure tests, provided that such tests are required at least once every three years. The commission shall consider the permit to have been amended to require pressure tests at the frequency specified in the letter of authorization.

(9) **Exceptions. The director may grant an exception to any provision of this subsection upon proof of good cause and payment of the fees required by §3.78 of this title. If the director denies an exception, the operator shall have a right to a hearing upon request. After hearing, the examiner shall recommend a final action by the Commission.**

(n) ~~[(k)]~~ Area Permits. A person may apply for an area permit that authorizes injection into new or converted wells located within the area specified in the area permit. For purposes of this subsection, the term "permit area" shall mean the area covered or proposed to be covered by an area permit. Except as specifically provided in this subsection, the provisions of **this section applicable to injection wells** ~~[subsections (a) - (j) of this section]~~ shall apply in the case of an area permit and all injection wells

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converted, completed, operated, or maintained in accordance with that permit. Except as otherwise specified in the area permit, once an area permit has been issued, the operator may apply to operate individual wells within the permit area as injection wells as specified in paragraph (3) of this subsection.

(1) An application for an area permit must be accompanied by an application for at least one injection well. The applicant must:

(A) identify the maximum number of injection wells that will be operated within the permit area;

(B) identify the depth(s) of usable-quality water within the permit area, as determined by the Groundwater Advisory Unit of the Oil and Gas Division;

(C) for each existing well in the permit area that may be converted to injection under the area permit, provide a wellbore diagram that specifies the casing and liner sizes and depths, packer setting depth, types and volumes of cement, and the cement tops for the well. A single wellbore diagram may be submitted for multiple wells that have the same configuration, provided that each well with that type of configuration is identified on the wellbore diagram and the diagram identifies the deepest cement top for each string of casing among all the wells covered by that diagram.

(D) provide a wellbore diagram(s) showing the type(s) of completion(s) that will be used for injection wells drilled after the date the application for the area permit is filed, including casing and liner sizes and depths and a statement indicating that such wells will be cemented in accordance with the cementing requirements of §3.13 of this title [~~relating to Casing, Cementing, Drilling, and Completion Requirements~~] (Statewide Rule 13);

(E) identify the type or types of fluids that are proposed to be injected into any well within the permit area;

(F) identify the depths from top to bottom of the injection interval throughout the permit area;

(G) specify the maximum surface injection pressure for any well in the permit area covered by the area permit;

(H) specify the maximum amount of fluid that will be injected daily into any individual well within the permit area as well as the maximum cumulative amount of fluid that will be

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1 injected daily in the permit area;

2 (I) in lieu of the area-of-review required under subsection (e) of this section and  
3 subject to the area-of-review variance provisions of subsection (e) of this section, review the data of  
4 public record for wells that penetrate the proposed injection interval within the permit area and the area  
5 1/4 mile beyond the outer boundary of the permit area to determine if all abandoned wells have been  
6 plugged in a manner that will prevent the movement of fluids from the injection interval into  
7 **underground sources of drinking water** ~~[freshwater strata]~~. The applicant shall identify in the  
8 application the wells which appear from the review of such public records to be unplugged or improperly  
9 plugged and any other unplugged or improperly plugged wells of which the applicant has knowledge. The  
10 applicant shall also identify in the application the date of plugging of each abandoned well within the  
11 permit area and the area 1/4 mile beyond the outer boundary of the permit area; and

12 (J) furnish a map showing the location of each existing well that may be  
13 converted to injection under the area permit and the location of each well that the operator intends, at the  
14 time of application, to drill within the permit area for use for injection. The map shall be keyed to identify  
15 the configuration of all such wells as described in subparagraphs (C) and (D) of this paragraph.

16 (2) In lieu of the notice required under subsection **(e)(1)** ~~[(e)(1)]~~ of this section, notice of  
17 an area permit shall be given by providing a copy of the area permit application to each surface owner of  
18 record within the permit area; each commission-designated operator of a well located within one-half mile  
19 of the permit area; the county clerk of each county in which all or part of the permit area is located; and  
20 the city clerk or other appropriate city official of any incorporated city which is located wholly or  
21 partially within the permit area, on or before the date the application is mailed to or filed with the  
22 commission. Notice of an application for an area permit shall also be given in accordance with the  
23 requirements of subsection **(e)(2)** ~~[(e)(2)]~~ of this section. If, in connection with a particular application,  
24 the **director** ~~[commission or its delegate]~~ determines that another class of persons, such as adjacent  
25 surface owners or an appropriate **groundwater** ~~[underground water]~~ conservation district, should receive  
26 notice of the application, the **director** ~~[commission or its delegate]~~ may require the applicant to mail or  
27 deliver a copy of the application to members of that class.

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(3) Once an area permit has been issued and except as otherwise provided in the permit, no notice shall be required when an application for an individual injection well permit for any well covered by the area permit is filed.

(4) Prior to commencement of injection operations in any well within the permit area, the operator shall file an application for an individual well permit with the commission in Austin. The individual well permit application shall include the following:

(A) the well identification and, for a new well, a location plat;

(B) the location of any well drilled within 1/4 mile of the injection well after the date of application for the area permit and the status of any well located within 1/4 mile of the injection well that has been abandoned since the date the area permit was issued, including the plugging date if such well has been plugged;

(C) a description of the well configuration, including casing and liner sizes and setting depths, the type and amount of cement used to cement each casing string, depth of cement tops, and tubing and packer setting depths;

(D) ~~an~~ application **fees required by §3.78 of this title** ~~[fee in the amount of \$100 per well]; and~~

(E) any other information required by the area permit.

(5) An individual well permit may be issued by the **director** ~~[commission or its delegate]~~ in writing or, if no objection to the application is made by the **director** ~~[commission or its delegate]~~ within 20 days of receipt of the application, the individual well permit shall be deemed issued.

(6) All individual injection wells covered by an area permit must be permitted in accordance with the requirements of this subsection and converted or completed, operated, maintained, and plugged in accordance with the requirements of this section and the area permit.

~~(g)~~ ~~(h)~~ Gas storage operations. Storage of gas in productive or depleted reservoirs shall be subject to the provisions of §3.96 of this title (relating to Underground Storage of Gas in Productive or Depleted Reservoirs).

~~(p)~~ ~~(m)~~ Plugging. Injection wells shall be plugged upon abandonment in accordance with

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§3.14 of this title (relating to Plugging).

**(q)** ~~(n)~~ Penalties.

(1) Violations of this section may subject the operator to penalties and remedies specified in **§3.107 of this title (relating to Penalty Guidelines for Oil and Gas Violations)**, Title 3 of the Natural Resources Code and any other statutes administered by the commission.

(2) The certificate of compliance for any oil, gas, or geothermal resource well may be revoked in the manner provided in §3.73 of this title (relating to Pipeline Connection; Cancellation of Certificate of Compliance; Severance) for violation of this section.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas on \_\_\_\_\_, 2012.

Filed with the Office of the Secretary of State on \_\_\_\_\_, 2012.

\_\_\_\_\_  
Mary Ross McDonald  
*Texas Register* Liaison/Certifying Official  
Railroad Commission of Texas